EDWARDS and COMPANY INC.

ELECTRIC SIGNALING DEVICES

1872
EDWARDS

A. I. A. File Number 31 i 1

CATALOG NUMBER 14

CATALOG No. 14

Canceling Catalog Number 10
And All Revisions Pertaining Thereto

Electric Signaling Devices

ESTABLISHED 1872

EDWARDS and COMPANY INC.

140th AND EXTERIOR STREETS
NEW YORK CITY

ATLANTA
BALTIMORE
BOSTON
CHICAGO
COLUMBUS
DALLAS
DENVER
DETROIT
KANSAS CITY
LOS ANGELES
NEW ORLEANS
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ST. LOUIS
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PITTSBURGH
PORTLAND
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Canadian Offices

MONTREAL
WINNIPEG
VANCOUVER
TORONTO
CALGARY

Printed in U. S. A.
E-15-82

140TH AND EXTERIOR STREETS, NEW YORK CITY

A complete, modern plant, devoted in its entirety to the design and manufacture of

EDWARDS ELECTRIC SIGNALING DEVICES

TERMS OF SALE

DELIVERY

Items marked * are ordinarily carried in stock. If the stock should become depleted, manufacturing schedules are such as to make shipment within one week in most cases.

GUARANTEE

EDWARDS signaling devices are guaranteed from defects of manufacture Every item is thoroughly tested before leaving the factory.

INSTALLATION

Signaling devices are as susceptible to the rules of electricity as lamps, motors, etc. The operating current shown in the catalogue for each device is the actual voltage on which the device is tested before it leaves the factory. This voltage is *at the device*, however, and the size of wire and length of runs must be considered. Wire must be large enough to assure the required voltage *at the device*; and in transformer installations the *wattage* must be adequate to produce the voltage *at the device*.

RETURN OF MATERIAL

Before claiming material defective in operation, consider the above paragraph and be sure the installation is not at fault. Measure the voltage *at the device*.

Standard stock material is subject to 20% service charge, or 10% exchange charge if similar material is ordered for replacement. Permission must be secured to return material, and that returned without permission is subject to 33⅓% service charge if accepted.

CLAIMS

After bill of lading or express receipt is signed, the responsibility is transferred to consignee; claims should be made on the transportation Company. If shipment arrives in damaged condition, have freight or express agent so note on packing slip or you will be unable to press your claim. Claims of short shipment must be made within 5 days of receipt of material.

TERMS OF SALE

1 F.O.B. point—Factory, New York City.

2 Freight or express will not be allowed.

3 Terms 30 days.

DIXIE AND CADET BELLS

Small Bells and Buzzers for Average Apartments, Residences, etc.

Battery or Transformer Operation

Dixie Bell

FOR many years these have been known as the best quality of standard double magnet iron box bells and buzzers.

Hammer rod, ball, and armature are all one piece, and the hammer ball is under the gong to prevent disarrangement. The armature is pivoted at the nearest possible point to the cover so that the hole in the cover is so small as to make the bell practically weather, bug and dust proof. Equipped with new code binding posts.

Dixie Non-Adjustable Bell

Standard Resistance Only

SCHEDULE E

Cat. No.	Size	Std. Pkg.	†Weight	List
*720	2½″	100	54 lbs.	$0.92
*725	Buzzer	100	38 lbs.	.89

Dixie Buzzer

Cadet Adjustable Bell

Special Voltage and Resistance, Page 58

SCHEDULE E

Cat. No.	Size	Std. Pkg.	†Weight	List
*710	2½″	100	55 lbs.	$1.04
*712	3″	100	62 lbs.	1.18
*714	4″	50	43 lbs.	1.53
*715	Buzzer	100	39 lbs.	1.02
***Cow or Sleigh Bell**		50	32 lbs.	1.83

No. 730
Buz-A-Bel

No. 730 Buz-A-Bel

Battery or Transformer Operation

A BELL and buzzer on one frame under one cover with the same features of construction as the Dixie and Cadet Bells described above, having one-piece hammer rod, ball and armature with the hammer ball under the gong and New Code binding posts.

SCHEDULE E

Cat. No.	Size	Std. Pkg.	†Weight	List
*730	2½″	100	59 lbs.	$1.20

* Carried in stock.
† Per std. pkg. packed for shipment.

THE NUBEL LINE

Small Bells, Buzzers and Combinations for Economical Residence and Office Work

Battery or Transformer Operation

A complete, coordinated line of excellent quality devices for low cost installations. Developed after careful study to allow a dependable installation at no greater cost than poorer grade bells and signals of other makes.

No. 735

No. 735 Nubel

A double magnet bell that operates perfectly on battery or transformer. It has phosphor bronze springs, silver contacts, and New Code binding posts. Grey enamel finish. The buzzer is of the same excellent construction.

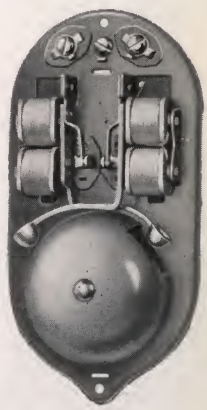
Nos. 737 and 738

No. 737 Combel

A DOUBLE magnet bell and double magnet buzzer on one frame, with the complete mechanism *except the binding posts* under a neat cover so that it may be repainted to match surroundings if desired. Grey enamel finish. Excellent operation on battery or transformer. An ideal labor saver in installation.

No. 738 Tubel

TWO double magnet bells of *different tone* in one frame with the complete mechanism *except the binding posts* under a neat cover. Grey enamel finish that may be repainted to match surroundings if desired. Excellent operation on battery or transformer. An ideal labor saver for small residence work, apartments, and flats.



No. 738
Showing Construction

SCHEDULE Q

Cat. No.	Std. Pkg.	†Weight	List Price
*735 Nubel	100	45 lbs.	$0.64
*736 Buzzer	100	32 lbs.	.61
*737 Combel	50	56 lbs.	1.12
*738 Tubel	50	64 lbs.	1.20

* Carried in stock.
† Approximate. Per std. pkg. packed for shipment

No. 13 Lungen Bells

Best Quality Small Bells for All Better Grade Signaling Work

Battery or Transformer Operation

Engineering Data, Special Voltage and Resistance Page 58

No. 13

LUNGEN BELLS are used where the type of installation requires a better bell, and neater appearance than the iron box type. Lungen Bells have phosphor bronze springs, double adjustment, pure hard-drawn silver contacts. To meet all conditions they are available from 1″ size (smallest bell ever made) to the 6″ size. Finish, up to 4″ size, all nickel. 6″ size all black. Sizes 1″ to 3″ will operate on transformer.

SCHEDULE E **STANDARD PACKAGE 10 ASSORTED**

Size	†Weight	List	Size	†Weight	List
*1″	2 oz.	$2.00	*3″	¾ lb.	$2.00
*1¾″	¼ lb.	1.80	*4″	1 lb.	2.20
*2½″	½ lb.	1.90	*6″	3½ lbs.	9.45
Cow or Sleigh Bell	¾ lb.	2.20			

*No. 156 Monitor Bells

Battery or Transformer Operation

Engineering Data, Special Voltage and Resistance Page 58

No. 156

AN ENTIRELY self-contained bell that presents a neater appearance than the usual type. The hammer-rod moves on a straight line and strikes the inside of the gong. This allows the bell to be made weather, bug and dust proof. The springs are phosphor bronze, the contacts pure hard-drawn silver. 3″ gong, nickel, base finished black.

SCHEDULE T

Type	†Weight	List
*Vibrating	1¼ lbs.	$1.80
Single Stroke	1¼ lbs.	2.30

*No. 182 Street Car Signal

Battery or Transformer Operation

Engineering Data, Special Voltage and Resistance Page 58

No. 182

The same mechanism as the No. 156 Monitor Bell, the hammer-rod striking the cast metal case. The noise given is distinctly different from the usual type of buzzer. Mounted on a gasket, it is absolutely waterproof. Finish black enamel.

SCHEDULE T

Size	†Weight	List
*3″ diameter	1¼ lbs.	$3.00
Rubber Gasket	1 oz.	.40

* Carried in stock.

† Approximate, per article in shelf package.

No. 15 Lungen Buzzers

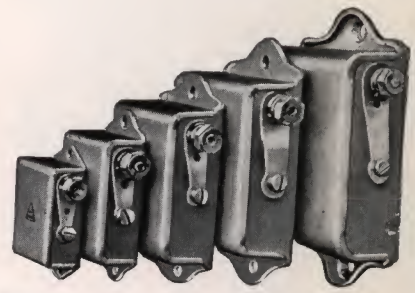
Best Quality Buzzers for All Better Grade Signaling Work
Battery or Transformer Operation

Engineering Data, Special Voltage and Resistance, Page 58

THESE buzzers are made to fill the need for a better article than the ordinary iron box type. For better class installations in offices, hotels, hospitals, residences, they will be found more satisfactory. Five sizes varying in tone and volume are available to meet all conditions. Phosphor bronze springs, double adjustment, pure hard-drawn silver contacts. The covers fit tightly and the buzzers are absolutely bug and dust proof. Sizes 0, 1, 2 will operate on transformer. Finish—all nickel.

SCHEDULE E **STANDARD PACKAGE—10 ASSORTED**

Size	Dimensions	†Weight	List
*0	1⅝″ x 1⅛″	2 oz.	$1.85
*1	2⅛″ x 1 5/16″	4 oz.	1.45
*2	2 9/16″ x 1¾″	6 oz.	1.70
*3	3″ x 2″	8 oz.	1.95
*4	3½″ x 2¼″	10 oz.	2.20



Sizes 0 1 2 3 4

*No. 750 Bronx Watchcase Buzzer

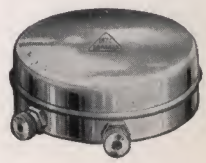
Battery or Transformer Operation

Engineering Data, Special Voltage and Resistance, Page 58

THE smallest round buzzer made, entirely self-contained. It is carried easily in the pocket and is often used for a testing buzzer. The cover fits tightly, making it weather, bug and dust proof. Springs are phosphor bronze, the contacts pure, hard-drawn silver. Finish all nickel.

SCHEDULE E **STANDARD PACKAGE—10**

Size	†Weight	List
⅝″ High, 1¾″ Dia.	3 oz.	$1.25



No. 750

No. 195 Desk Buzzer

A COMBINATION buzzer and desk push in which the buzzer is included within the push itself. Eliminates extra wiring for buzzer. No screws to mar desks or tables. Makes wiring simpler. Plate is neatly perforated to allow the free emission of sound. Standard finish black; Mahogany or oak, no extra charge. Ideal for use in offices or banks where user calls several persons but only one calls him. See page 37 for prices.

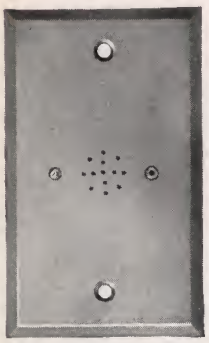
No. 195

* Carried in stock.
† Approximate, per article in shelf package.

No. 16 Flush Buzzer

Battery or Transformer Operation

Engineering Data, Special Voltage and Resistance, Page 58



No. 16

FOR use in better class offices, hospitals, residences, where the appearance of the usual surface type buzzer is objectionable. The buzzer is mounted on the back of a standard switch plate to fit standard switch box Standard finish brush brass; nickel no extra charge. Special finishes see page 39. Operates on transformer.

SCHEDULE T

Metal Plate	†Weight ¾ lb	***List Price $2.50 each**
Bakelite Plate	†Weight 9 oz	**2.75 each**

No. 160 Loud Signal Buzzer

No. 160

THE movement of the No. 156 Monitor Bell on a bracket so that hammer strikes against the solid brass plate. This produces a very loud sound entirely different from a bell or buzzer and is particularly adaptable for alarm systems where a distinctive sound is desired. It is made to fit a standard switch box. Price does not include switch box. Standard finish, brush brass, nickel, no extra charge. Special finishes on page 39.

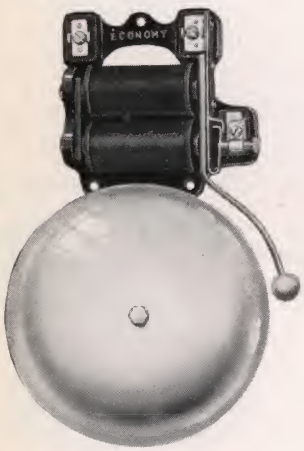
SCHEDULE T

†Weight 1 lb	**List Price $5.50 each**

No. 17 ECONOMY SKELETON BELL

Battery Operation Only

Engineering Data, Special Voltage and Resistance, Page 58



No. 17
Economy Bell

SKELETON bells are used where a heavier duty bell than the iron box type is needed but where a weatherproof or covered bell is unnecessary. For the covered type see No. 13, page 6. For weatherproof see No. 100, page 10. These bells are for D. C. only. For A. C. see No. 510, page 12, or No. 551, page 13.

The construction allows free operation of the entire spring in its full length. The armature after a stroke returns to its normal position without an abrupt stop, and continues past the normal point of contact, thereby gaining extra momentum for the successive stroke.

Contact points are pure, hard-drawn silver.

Cast Cow Gongs are illustrated and priced on page 17.

SCHEDULE E — **STANDARD PACKAGE—5 ASSORTED**

Size	†Weight	List Price
*3″	2 lbs.	$ 5.55
*4″	2¾ lbs.	6.58
*5″	3 lbs.	7.80
*6″	3½ lbs.	8.82
*8″	5½ lbs.	14.37
*10″	9¾ lbs.	21.34
*12″	12¼ lbs.	27.50

* Carried in stock.
† Approximate, per article in shelf package.

No. 222 D. C. BELL

The Best Quality Clapper Type Bell for 6-48 Volts D. C.

Engineering Data, Special Voltage and Resistance, Page 58

THESE bells are ideal for schools, combining the best in appearance and quality.

The vibrating unit is a distinct advance over older clapper type bells, giving much more power and longer life. Its construction is arranged to allow full operation of the armature spring over its entire length with a mechanical breaking of the circuit entirely independent of the spring action. When the circuit is broken and the armature returns to its normal position, it is not stopped abruptly but continues past the normal point of contact and gains momentum for the repetition of the operation.

Two Wire Entrances are provided; one at the top for surface wiring and one at the back for concealed wiring. Both of these are sealed with wax which may be knocked out of the one to be used.

Conduit Fittings are made so that they may be installed with the conduit and the bell placed thereon after the wires are pulled through. Fittings are drilled top and bottom for ½″ conduit unless ¾″ is specified. A pipe plug is furnished for use when bell is on end of line.

Cast Cow Gongs are illustrated and priced on page 17.

No. 222

No. 222 Conduit Type

STANDARD No. 222 D. C. BELL FOR 6-8 VOLTS D. C. **SCHEDULE E**

Size	†Weight	List	Size	†Weight	List
*3	2 lbs.	$ 8.85	*8	11½ lbs.	$19.50
*4	2¼ lbs.	10.55	*10	12½ lbs.	25.55
*6	8½ lbs.	14.10	*12	16 lbs.	31.25
			*Buzzer	1¾ lbs.	7.15

WEATHERPROOF GASKET: Add $2.00 list for rubber gasket.

CONDUIT ATTACHMENT: Add $1.00 list for separable conduit fitting for flush or surface conduit.

PART GRID TYPE (No. 222 PG): Add to standard bell as follows:

Size	†Weight	List Price
6″	¾ lb.	$ 7.50
8″	1 lb.	8.00
10″	1⅞ lbs.	9.00
12″	2½ lbs.	10.50

No. 222 P. G. Part Grid Type

No. 222 F. G. Full Grid Type

FULL GRID TYPE (No. 222 FG): Add to standard bell as follows:

Size	†Weight	List Price
6″	2¼ lbs.	$ 8.00
8″	3¼ lbs.	8.75
10″	5½ lbs.	10.00
12″	7 lbs.	12.00

YARD TYPE (No. 222 Y) **(with protective hood):** Add to Standard Bell.....$25.00 list

SPECIAL VOLTAGE: Up to 30 V. no charge.

* Carried in stock.
† Per article in shelf package.

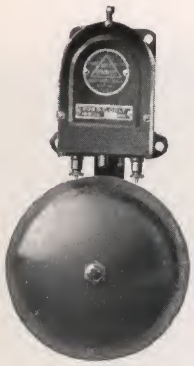
No. 222 Buzzer

No. 222Y Yard Type

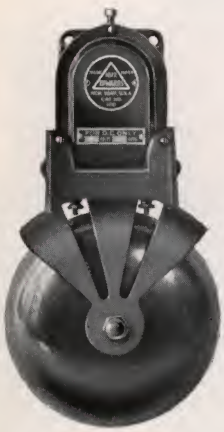
RECTI BELLS

Best Quality, Plunger Type, Heavy Duty Bells, For All Battery, A. C. and D. C., Lighting Voltages

Engineering Data, Special Voltage and Resistance, Page 58



No. 100
Standard Type



No. 100 P. G.
Part Grid Type

No. 100 F. G.
Full Grid Type

THE Recti is a standard Edwards bell which has for years withstood the test of time and hard service. It is absolutely dependable and may be relied upon to give satisfactory service under most extreme operating conditions. The movement is what is known as the straight line or plunger type and its design is an exclusive feature developed by this company over forty years ago.

The Hammer Rod is of brass so suspended at the armature that easy operation with no side motion is assured. The striking end of the rod is suspended by the case itself so no amount of jolting or shaking will alter the adjustment. This plunger type movement allows the easiest possible operation and the strongest blow but puts a minimum strain on the springs and hammer rod and insures long life.

The Springs are made of the highest grade phosphor-bronze and are designed to act as demagnetizer between the magnet head and the armature when the stroke has been made. This gives a quick snappy action.

The Contacts are carbon (except in the 3″ and 4″ sizes where they are silver). They are made from standard 10 mm. headlight rod. Long, careful tests have proven the superiority of this type of contact. They have a far longer life than the average size metal contact; they are easily renewed and, most important, they *cannot rust, stick or corrode*.

The Magnets are scientifically proportioned and impregnated with a moisture repelling, insulating compound.

Adjustment is easily made, without removing the cover, by a heavy screw and locknut at the end of the case.

The Case is of iron, heavily japanned and provided with a felt gasket, oil treated. There are no openings other than the one for the hammer rod. As the rod works in a straight line, it is just slightly smaller than the hole, so the bell is absolutely weather, bug and dust proof.

The Gong is of bell metal, finished black to match the case.

CAST COW GONGS are illustrated and priced on page 17.

HAND TRIP—page 17.

No. 217 —High Voltage Recti Bell for D. C. up to 600 volts, has binding posts and contact mechanism on slate. Long, quick break. Operates only with gong up.

No. 220A—Recti Buzzers, have the same movement and features as the Recti Bell, 3″ movement.

No. 220B—Recti Buzzers, have the same movement and features as the Recti Bell, 6″ movement.

(See Next Page)

No. 100 RECTI BELL

Engineering Data, Special Voltage and Resistance, Page 58

SCHEDULES { Battery Bells, Schedule E—Std. Pkg.—5 assorted
Lighting Circuit Bells, Schedule T—Std Pkg. 1

Size	†Weight	◆For Battery	For D. C. Ltg. Cts.		For A. C. Ltg. Cts.	
			110 V.	220 V.	110 V.	220 V.
*3	3 lbs.	$ 8.85	$ 17.90	$ 25.80	.....	.....
*4	4 lbs.	10.85	19.10	27.30	$17.45	$25.65
*6	6 lbs.	17.80	30.50	43.25	31.80	44.55
*8	9 lbs.	22.00	37.00	51.90	37.35	52.30
*10	15 lbs.	37.00	54.90	72 90	60.00	77.95
*12	18 lbs.	49.90	67.85	85.80	80.25	98.25
*14	23 lbs.	61.60	82.50	103.50	.....	.....
*16	27 lbs.	129.30	159.20	189.10	.....	.....
18	31 lbs.	146.95	176.90	206.80	.....	.....
Buzzer 220A	2 lbs.	7.90	10.45	.....	.....	.....
Buzzer 220B	4 lbs.	11.90	17.95	24.10	19.95	25.10

†CONDUIT ATTACHMENT (No. 1001) for use on all type bells add.....$10.00 list

PART GRID TYPE (No. 100PG): Add to Standard Bell as follows:
(Same Schedule as bell).

Size	†Weight	List	Size	†Weight	List
4	⅓ lb.	$5.50	12	2½ lbs.	$10.50
6	¾ lb.	6.50	14	4 lbs.	24.70
8	1 lb.	7.75	16	5½ lbs.	35 00
10	2 lbs.	9.00	18	6½ lbs.	45.00

FULL GRID TYPE (No. 100FG): Add to Standard Bell as follows:
(Same Schedule as bell)

Size	†Weight	List	Size	†Weight	List
4	1 lb.	$ 6.00	12	7¾ lbs.	$12.00
6	2¼ lbs.	7.00	14	12 lbs.	34.50
8	3 lbs.	8.50	16	16 lbs.	45.00
10	5½ lbs.	10.00	18	20 lbs.	56.00

YARD TYPE (No. 100Y) (with protective hood): Add to Standard Bell .....$25.00 list

HIGH VOLTAGE TYPE (No. 217) **SCHEDULE T**
Note: This bell must be installed with the gong up as shown in illustration.

Size	300-600 V. D. C.	†Weight	Size	300-600 V. D. C.	†Weight
6	$68.30	6 lbs.	12	$107.00	18 lbs.
8	73.25	14 lbs.	14	130.85	23 lbs.
10	91.35	15 lbs.	16	193.40	27 lbs.
			18	227.50	31 lbs.

* Carried in stock.
† Approximate, per article in shelf package. Add 1 lb. for conduit type.
◆ Actual voltage recommended for various sizes see page 58.


Recti Buzzer


No. 100Y
Yard Type


No. 217
High Voltage Type

THE No. 510 A. C. BELL

Best Quality Clapper Type Bell for Transformer and 110 V. A. C. Lighting Circuits

For 220 V. A. C. See Recti or No. 551 Bells

Engineering Data, Special Voltage and Resistance, Page 58

No. 510
Standard

Conduit Type

THESE bells are designed with laminated magnets and specially constructed armature for efficient operation on transformer where a bell with contacts is desired. The contacts are silver, having a large area and excellent current carrying capacity. They are easily replaceable.

For Plunger Type A. C. bells without contacts, see No. 551, page 13.

Transformers will be found on page 19. The correct size transformer is very important and on page 59 an actual installation chart will be found. This eliminates uncertain formulas and guessing and assures an efficient system.

Conduit fittings are made so that they may be installed with the conduit and the bell placed thereon after the wires are pulled through. Fittings are drilled top and bottom for ½″ conduit unless ¾″ is specified. A pipe plug is furnished for use when bell is on end of line.

Cast cow gongs are illustrated and priced on page 17.

No. 510PG
Part Grid

No. 510FG
Full Grid

No. 510 Buzzer

Yard Type

SCHEDULE E **STANDARD PACKAGE—5 ASSORTED**

Standard No. 510 Bell

Size	†Weight	Transformer 6-24 Volts A. C.	110 V. A. C. See Note for 220 V.
*3″	2 lbs.	$ 9.50	$17.75
*4″	2¼ lbs.	10.25	19.50
*6″	8½ lbs.	19.10	31.80
*8″	11½ lbs.	23.70	38.65
*10″	12½ lbs.	42.35	60.30
*12″	16 lbs.	48.55	66.50
*Buzz.	1¾ lbs.	7.15	15.40

Note: For 220 V. see Recti or No. 551 Bells.

WEATHERPROOF GASKET: For use on all type bells add $2.00 list.

†**CONDUIT ATTACHMENT:** For use on all type bells { 3″ and 4″ add $4.00 list. / 6″ to 12″ add $5.00 list.

PART GRID TYPE: (No. 510PG). Add to standard bell:

Size	Weight	List	Size	Weight	List
3	5 ozs.	$6.75	8	1 lb.	$ 8.00
4	5 ozs.	6.75	10	1⅛ lbs.	9.00
6	¾ lbs.	7.50	12	2½ lbs.	10.50

FULL GRID TYPE: (No. 510FG). Add to standard bell:

Size	Weight	List	Size	Weight	List
3	.....	....	8	3 lbs.	$ 8.75
4	1 lb.	$7.25	10	5½ lbs.	10.00
6	2¼ lbs.	8.00	12	7¾ lbs.	12.00

YARD TYPE (No. 510Y) (**with protective hood**): Add to Standard Bell.....$25.00 list

* Carried in stock.

† Per article in shelf package. For conduit type bells add approximately 3 lbs. per bell.

No. 551 A. C. BELL

A Best Quality, No-Contact, Polarized, Plunger Type Bell for All A. C. Voltages

Engineering Data, Special Voltage and Resistance, Page 58

THE radically different construction of this new bell gives far more volume and better quality of sound. The extreme simplicity of the movement so reduces the wearing parts that the life of the bell is many times longer than that of other designs. It is without equal for traffic signals, mines, warehouses and all standard signaling purposes. The binding posts and all parts are completely covered; and as the hammer rod operates in a straight line, the hole in the cover is but little larger than the rod itself, which makes the bell bug and dust proof. Rustproof gongs are standard equipment, and with the addition of a rubber gasket the bell is absolutely weatherproof.

1. No contacts to wear, stick or replace.
2. No pivots, coil springs or points of friction.
3. Absolutely no adjustment. The only wearing part is where the hammer strikes the gong and the mechanism **automatically** adjusts itself to this.
4. The usual Edwards guarantee.
5. Approved by the National Board of Fire Underwriters.

SCHEDULE E — **STANDARD PACKAGE—5 ASSORTED**

Size	†Weight	8–16 V. A. C.	110–125 V. A. C.	220–250 V. A. C.
No. 551 SINGLE GONG TYPE				
* 3″	2½ lbs.	$ 9.50	$12.33	$14.52
* 4″	3 lbs.	10.25	13.10	15.20
* 6″	5 lbs.	17.00	19.43	20.30
* 8″	12 lbs.	21.30	23.68	24.50
*10″	14 lbs.	30.32	32.83	33.60
*12″	16½ lbs.	39.60	45.28	50.93
*Buzzer	1½ lbs.	7.10	9.00	13.00
No. 552 DOUBLE GONG TYPE				
3″	3 lbs.	$ 9.92	$13.20	$19.20
4″	4 lbs.	10.70	13.95	19.70
6″	8 lbs.	24.10	27.35	33.05
8″	16 lbs.	28.90	31.55	37.25
10″	19 lbs.	34.20	37.50	43.20

WEATHERPROOF GASKET: Add $2.00 list for rubber gasket.

CONDUIT ATTACHMENT: Add $1.00 list for separable conduit fitting for flush or surface conduit.

PART GRID TYPE: (No. 551PG). Add to standard bell as follows:—(Double for No. 552).

Size	†Weight	List
6″	¾ lb.	$ 7.50
8″	1 lb.	8.00
10″	1⅞ lbs.	9.00
12″	2½ lbs.	10.50

FULL GRID TYPE: (No. 551FG). Add to standard bell as follows:—(Double for No. 552).

Size	†Weight	List
6″	2¼ lbs.	$ 8.00
8″	3¼ lbs.	8.75
10″	5½ lbs.	10.00
12″	7 lbs.	12.00

YARD TYPE (No. 551Y) (**with protective hood**): Add to Standard Bell.....$25.00 list
SPECIAL VOLTAGE: Up to 30 V. no charge.

* Carried in stock.
† Per article in shelf package.


No. 551 Bell


Conduit Attachment


Half Grid No. 551 P. G.


Full Grid No. 551 F. G.


Yard Type No. 551Y


No. 551 Buzzer


No. 552 Double Gong Type

ELECTRO-MECHANICAL BELLS

For Fire Alarm and Other Systems
Requiring Very Low Current Consumption

No. 133

OPERATED by a strong spring mechanism which is released by an exceptionally small flow of current. The mechanism is entirely insulated from the case. The binding posts are on the side, where they are most accessible.

The hammer, when released, makes a full revolution, passing under the gong to an inclined plane and strikes the gong with the great force gathered in the revolution. Recoil causes it to drop and become locked in its original position.

VOLTAGE: Battery, 110 volts D. C., 110 volts A. C. for **open circuit. Closed circuit** bells can be furnished for battery and 110 V. D. C. only.

NUMBER OF STROKES: 500 strokes per winding are guaranteed and this number is generally exceeded.

WINDING KEYS: are furnished with each order. One for every six bells or less. Additional keys $3.00 list.

FINISH: Red frame, black gong. All black if desired.

SPECIAL RESISTANCE AND ENGINEERING DATA: See page 53.

RUN DOWN SIGNAL: To indicate when bell needs winding. Add to list $6.00.

THE FOLLOWING TYPES ARE STANDARD:

TYPE S —SINGLE STROKE. Open or closed circuit D. C. Open circuit only A. C.

TYPE A —CONSTANT RINGING as long as circuit is kept closed.

TYPE B*—CONSTANT RINGING as long as circuit is kept open.

TYPE C —CONSTANT RINGING when circuit is closed, even though it be opened again. Add to list $10.00.

TYPE D*—CONSTANT RINGING when circuit is opened, even though it be closed again. Add to list $10.00.

No. 1330

The above types are furnished in three styles of bells as follows:

SURFACE CONDUIT TYPE: No. 1330 for ¾″ or ½″ if specified.

CONCEALED CONDUIT TYPE: No. 1331, otherwise same as above.

NON-CONDUIT TYPE: No. 133.

SCHEDULE T

Size	†Weight	No. 133	Nos. 1331 and 1330	Add to List For Full Grid	Add to List For 110 V.*
6	22 lbs.	$ 72.40	$ 82.40	$ 7.00	$18.00
8	24 lbs.	74.95	84.95	8.50	18.00
10	27 lbs.	77.97	87.97	10.00	18.00
12	30 lbs.	85.75	95.75	12.00	18.00
14	33 lbs.	100.00	110.00	.....	18.00
16	37 lbs.	114.75	124.75	.....	18.00
18	42 lbs.	147.50	157 50	.....	18.00

* A. C. Bells furnished for open circuit only.
† Per article in shelf package.

THE RIOT BELL

"A Distinctive Warning"

For Operation on Battery and 110 Volts D. C. or A. C.

THE motor driven bell is an entirely new principle which has found quick recognition for fire departments, ambulances, burglar alarms and extension systems on street corners to warn of the approach of fire apparatus. A quick responding bell giving a loud, continuous volume of sound immediately upon pushing the button. The mechanism does not have to gather speed before it rings and there is no detraction from driving the vehicle as is the case with hand operated gongs.

It is absolutely weatherproof and especially constructed for outdoor service.

A smooth running high efficiency motor, especially designed for this service, is used. The striker is mounted *directly on the motor shaft*. No adjustment is necessary.

Furnished in types as follows:

No. 300

No. 300

Designed to meet the requirements of a loud ringing alarm or signal bell. Specify if for battery or lighting circuit. Used to great extent in mills, warehouses, etc., and for burglar and hold-up alarms.

No. 310

Designed for ambulances, fire, patrol or emergency vehicles. The gongs are struck alternately and being of different tones the volume of sound is greatly intensified. Operated from steering wheel push or foot push as desired.

No. 310

SCHEDULE T

Size	No. 300			No. 310		
	†Weight	6 Volts Battery	110 Volts D.C. or A.C.	†Weight	6 Volts Battery	110 Volts D.C. or A.C.
10″	23 lbs.	$123.50	$153.40	.....	.....	.....
12″	24 lbs.	127.20	157.10	30 lbs.	$233.00	$233.00
14″	36 lbs.	134.70	164.60	45 lbs.	281.00	281.00
16″	39 lbs.	157.10	187.10	60 lbs.	361.00	361.00
18″	42 lbs.	172.10	202.00	75 lbs.	411.00	411.00

† Per article in shelf package.

SINGLE STROKE BELLS

For Fire and Signaling Systems

SOLENOID type construction, giving a loud, clear ring. The operation is quick and precise, ideal for all coded signaling purposes. The construction eliminates springs and pivots and the life of the bell is unusually long.

The entire mechanism is under the gong. For surface conduit work a separable box is furnished with knockouts on all sides. This same box can be mounted flush and an extension cover is furnished for mounting the bell.

Single stroke bells can be operated either in series or multiple, but will be furnished for the latter unless specified.

No. 23 (D. C.) No. 24 (A. C.)

When conduit type is ordered, flush fitting will be supplied unless otherwise specified.

Approved by National Board of Fire Underwriters.

FOR SIGNALING SYSTEMS: No. 23 (D. C.) No. 24 (A. C.).

FOR FIRE ALARMS: No. 23F (D. C.) No. 24F (A. C.).

Be sure to specify Voltage and whether for series or multiple operation.

SCHEDULE T

Size	†Weight	6 to 48 V.	110 to 125 V.	220 to 250 V.
4″	4 lbs.	$15.10	$19.25	$20.60
6″	5 lbs.	20.65	24.75	26.15
8″	6 lbs.	24.75	28.90	30.25
10″	8 lbs.	31.60	38.50	41.25
12″	11 lbs.	35.75	42.60	45.40

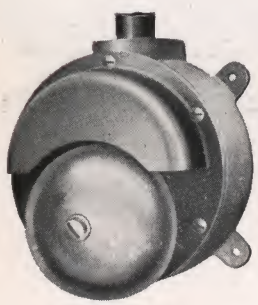
Phantom View Showing Movement and Compact Construction.

WATERTIGHT VIBRATING BELL AND BUZZER

6 to 30 Volts D. C.

Engineering Data, Special Voltage and Resistance, Page 58

THE case is made of iron, drilled to receive ½″ or ¾″ conduit, as specified. The movement embodies the intensified stroke principle so successfully used on other EDWARDS bells. The design is such as to permit the strongest stroke with the greatest current economy. Both case and mechanism are assembled to withstand heavy shocks and vibrations. A gasket between the case and cover and operation of the hammer rod though a stuffing box makes the bell absolutely watertight. This type bell is used to great extent in mines, shipyards, and places where chemical gas is present, in addition to its standard use on ships.



No. 1740

SCHEDULE T

Size	†Weight	List Price	Size	†Weight	List Price
3″	5 lbs.	$19.50	8″	7 lbs.	$39.50
4″	5 lbs.	22.20	Buzzer	4 lbs.	18.00
6″	6 lbs.	32.10	..	.....	.....

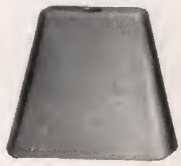
†Approximate article in shelf package

Cast Metal Cow Gongs

For All Types of Bells

SAME SCHEDULE AS BELL ON WHICH IT IS USED

Size of Cow Gong	Size of Regular Gong For Which Substituted	Add to List Price of Bell
2″ x 3″	3″	$ 2.50
3⅛″ x 5″	6″	5.00
4¼″ x 6″	8″	10.00



Cow Gong

No. 105 Protective Hood

For All Types of Bells

A protective hood with wire mesh front for all 6 to 18 inch bells listed. Furnished with wood back. Price does not include bell.

SCHEDULE T

	Weight	List Price
For use on 6 to 12 inch bells	2 lbs.	$25.00
For use on 14 to 18 inch bells	3 lbs.	30.00

Protective Hood

No. 200 Hand Trip

For All Types of Bells

May be furnished on any bell over the 6″ size, so mechanical operation is assured if the operating current fails. Developed especially for mines and installations where an alarm signal cannot be dependent on electricity.

SCHEDULE T
Add to price of bell used as follows:

Size	Weight	List Price	Size	Weight	List Price
6″	2½ lbs.	$10.00	14″	8 lbs.	$56.00
8″	2½ lbs.	15.00	16″	8 lbs.	65.00
10″	5 lbs.	25.00	18″	8 lbs.	75.00
12″	5 lbs.	36.00	...	.....	.....

Wood Mats

For All Types of Bells

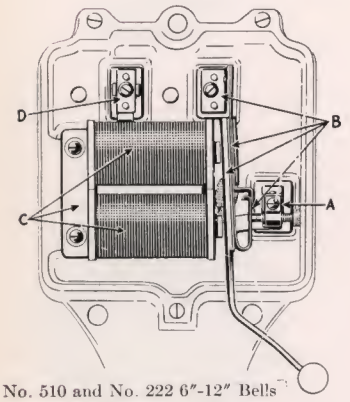
Furnished in genuine oak, stained, varnished or shellacked as specified. Furnished with mounting holes only, unless otherwise specified. State bell to be used with in ordering.

SCHEDULE T

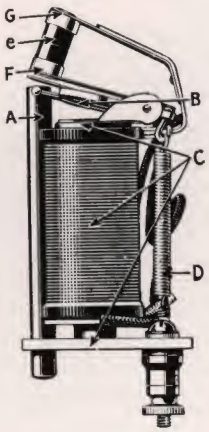
Size of Bell	List Price	Size of Bell	List Price
2½″ to 4″	$1.00	10″ to 14″	$10.00
5″ to 8″	2.25	16″ to 18″	16.00

No. 200
Hand Trip

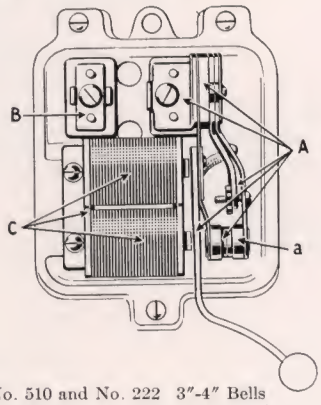
BELL CONSTRUCTION AND PIECE PARTS



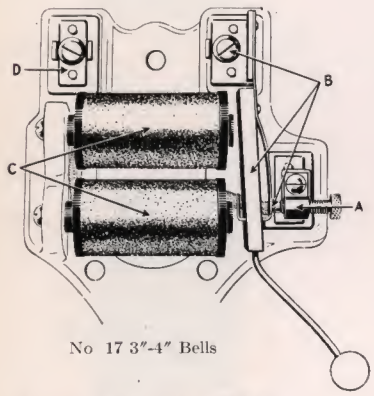
No. 510 and No. 222 6″-12″ Bells



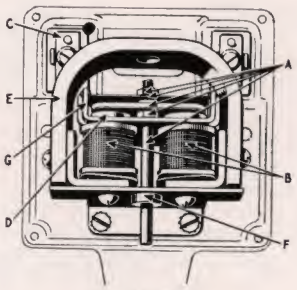
No. 100 Recti Bell



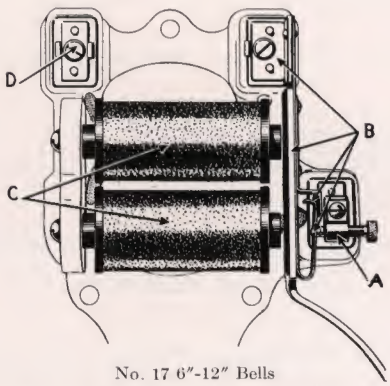
No. 510 and No. 222 3″-4″ Bells



No 17 3″-4″ Bells



No. 551 Bell



No. 17 6″-12″ Bells

No. 551 BELL

(A) HAMMER ASSEMBLY — List
- No. 8881 (3″-4″) Supplied Complete — $2.00
- No. 8016 (5″) Supplied Complete — 2.25
- No. 8017 (6″) Supplied Complete — 2.50
- No. 8019 (8″, 10″, 12″) Supplied Complete — 3.00

(B) MAGNET ASSEMBLY
- No. 8882 (3″-4″) Supplied Complete
- No. 5988 (5″-6″) Supplied Complete
- No. 5890 (8″-12″) Supplied Complete

⅓ price of bell

(C) TERMINAL AND INSULATOR ASSEMBLY
- No. 5293 (3″-4″) Supplied Complete — $0.50
- No. 8846 (6″-12″) Supplied Complete — .50

(D) CORE WASHER
- No. 718 (5″-6″) — $0.25
- No. 7951 (8″-12″) — .25

(E) PERMANENT MAGNET
- No. 8061 (3″-4″) — $1.00
- No. 5974 (5″-6″) — 1.40
- No. 5858 (8″-12″) — 1.60

(F) KEEPER ASSEMBLY
- No. 8463 (3″-4″) Supplied Complete — $0.60
- No. 8169 (5″-6″) Supplied Complete — .75
- No. 8170 (8″-12″) Supplied Complete — .95

(G) SPECTACLE
- No. 8453 (3″-4″) — $0.40
- No. 5979 (5″-6″ small) — .50
- No. 5880 (8″, 10″, 12″) — .60

No. 100 RECTI BELL

(A) HAMMER — List
- No. 722 (3″-4″ D. C.) — $0.25
- No. 758 (4″-12″ A. C.) — .25
- No. 40 (5″, 6″, 8″ D. C.) — .30
- No. 704 (10″-12″ D. C.) — .40
- No. 2724 (14″-18″ D. C.) — .75

(B) HAMMER SPRING
- No. 736 (3″-4″ D. C. and No. 220A) — $0.40
- No. 1085 (5″-8″ D. C.; 4″-12″ A. C. and No. 220B) — .40
- No. 701 (10″-12″ D. C.) — .40
- No. 665 (14″-18″ D. C.) — .40

(C) MAGNET ASSEMBLY (includes core washer, spectacle, coils and keeper) **Supplied Complete.**
- No. 7943 (3″-4″ D. C. and No. 220A)
- No. 7944 (5″-8″ D. C.; 4″-12″ A. C. and No. 220B)
- No. 7945 (10″-12″ D. C.)
- No. 7946 (14″-18″ D. C.)

⅓ price of complete bell

(D) TENSION SPRING — List
- No. 723 (3″-4″ D. C. and No. 220A) — $0.30
- No. 55 (5″-8″ D. C.; 4″-12″ A. C. and No. 220B) — .40
- No. 705 (10″-12″ D. C.) — .45
- No. 668 (14″-18″ D. C.) — .50

(E) CONTACTS
- No. 3495 (Silver) (3″-4″ D. C. and No. 220A) — $0.40
- No. 76 (Carbon) (4″-12″ A. C.; 5″-18″ D. C. and No. 220B) — .30

(F) CONTACT SPRING ASSEMBLY — With
Supplied Complete with Contact — Contact
- No. 1442 (3″-4″ D. C. and No. 220A) — $1.05
- No. 1842 (4″-12″ A. C.) — 1.05
- No. 3191 (5″-12″ D. C. and No. 220B) — 1.05
- No. 2120 (14″-18″ D. C.) — 1.05

(G) INTERRUPTING SPRING ASSEMBLY
Supplied Complete with Contact — With Contact
- No. 737 (3″-4″ D. C. and No. 220A) — $1.05
- No. 78 (4″-12″ A. C.) — 1.05
- No. 3192 (5″-12″ D. C. and No. 220B) — 1.05
- No. 666 (14″-18″ D. C.) — 1.05

No. 17 BELL (3-4 ln.)

(A) INTERRUPTING POST ASSEMBLY — List
- No. 6437 (3″-4″) Supplied Complete — $1.10

(B) VIBRATING UNIT
- No. 5328 (3″) Supplied Complete — $2.25
- No. 5631 (4″) Supplied Complete — 2.25

(C) MAGNET ASSEMBLY
- No. 3401 (3″-4″) Supplied Complete — ¼ price of bell

(D) SMALL TERMINAL ASSEMBLY
- No. 5718 (3″-4″) Supplied Complete — $0.45

No. 17 BELL (6-12 ln.)

(A) INTERRUPTING POST ASSEMBLY — List
- No. 6437 (6″-12″) Supplied Complete — $1.10

(B) VIBRATING UNIT
- No. 6056 (6″-8″) Supplied Complete — $2.25
- No. 6057 (10″) Supplied Complete — 2.25
- No. 6061 (12″) Supplied Complete — 2.25

(C) MAGNET ASSEMBLY
- No. 3398 (6″-12″) Supplied Complete — ¼ price of bell

(D) SMALL TERMINAL ASSEMBLY
- No. 5718 (6″-12″) Supplied Complete — $0.45

Nos. 510 and 222 (6-12 ln.) BELLS

(A) INTERRUPTING POST ASSEMBLY — List
- No. 6487 Supplied Complete — $1.10

(B) VIBRATING UNIT
- No. 6030 Supplied Complete — $2.25

(C) MAGNET ASSEMBLY
- No. 3562 Supplied Complete — ¼ price of bell

(D) SMALL TERMINAL ASSEMBLY
- No. 5718 Supplied Complete — $0.45

Nos. 510 and 222 (3-4 ln.) BELLS

(A) VIBRATING UNIT — List
- No. 3560 (3″) Supplied Complete — $2.25
- No. 3565 (4″) Supplied Complete — 2.25
- No. 4260 Buzzer, Supplied Complete — 2.25
- (a) **Carbon Contacts** No. 6441 (For 3″-4″ Bell and Buzzer) Supplied Separately — $0.30

(B) SMALL TERMINAL ASSEMBLY
- No. 5718 Supplied Complete — $0.45

(C) MAGNET ASSEMBLY
- No. 3562 Supplied Complete — ¼ price of bell

BELL RINGING TRANSFORMERS

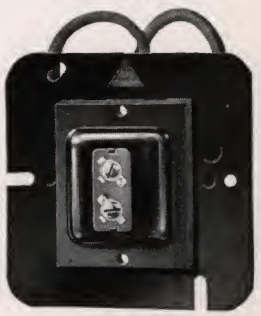
Engineering Data to Choose Correct Transformer, Page 59

EDWARDS transformers are correctly designed for the proper operation of all signaling devices. Fifty-five years' experience in the manufacture of signaling devices gives this Company the knowledge necessary to provide a transformer of the exact wattage, voltage, and other characteristics necessary to eliminate guess work on the part of the contractor and jobber.

No. 86


No. 86T


No. 86ER


No. 86ES


No. 860

BELL RINGING TYPES

(Heavy Duty and Toy Transformers see next page)

No. 86 Steel case, single voltage.

No. 87 Porcelain case, single voltage.

No. 86T Steel case, three voltage.

No. 86ER Fits on 3¼″ or 4″ octagon boxes.

No. 86ES Fits on 3¼″ or 4″ octagon and square boxes.

No. 860 Enclosed and fused, double pole.

No. 860P Enclosed and fused, single pole.

Approved by the National Board of Fire Underwriters

SCHEDULE E

Cat. No.	Watts	Primary Volts	Primary Cycles	Std. Pkge.	†Weight	List Price
86	25	110	60	50	54 lbs.	$1.28
86	25	110	25–40	50	54 lbs.	1.48
86T	25	6–8–14	60	50	56 lbs.	1.55
86T	25	110	25–40	50	56 lbs.	1.75
87	25	110	60	50	97 lbs.	1.55
87	25	110	25–40	50	97 lbs.	1.75
86ER	25	110	60	50	60 lbs.	1.55
86ER	25	110	25–40	50	60 lbs.	1.75
86ES	25	110	60	50	65 lbs.	1.55
86ES	25	110	25–40	50	65 lbs.	1.75
860	25	110	60	25	60 lbs.	2.50
860	25	110	25–40	25	60 lbs.	2.70
860P	25	110	60	25	60 lbs.	2.50
860P	25	110	25–40	25	60 lbs.	2.70

For 220 Volt primary add to list.....15%

† Approximate, per standard package.

HEAVY DUTY AND TOY TRANSFORMERS

Engineering Data, Page 59

*Heavy Duty Type

8–16–24 V. Secondary

A new line of heavy duty transformers to more adequately cover the signaling device field with a greater range of capacities.

Heavy Duty Type

SCHEDULE T

Cat. No.	Watts	Primary		Secondary	Approx. Weight	List Price
		Volts	Cycles			
88	50	110	60	8–16–24	3 lbs.	$ 5.15
88	50	110	25–40	8–16–24	3 lbs.	5.66
89	75	110	60	8–16–24	5 lbs.	7.73
89	75	110	25–40	8–16–24	5 lbs.	8.50
90	100	110	60	8–16–24	7 lbs.	9.00
90	100	110	25–40	8–16–24	7 lbs.	9.90
93	150	110	60	8–16–24	10 lbs.	11.00
93	150	110	25–40	8–16–24	10 lbs.	12.10
94	250	110	60	8–16–24	12 lbs.	22.50
94	250	110	25–40	8–16–24	12 lbs.	24.75

Toy Transformers

EDWARDS toy transformers are designed for use in the operation of toy electric trains, airplanes, motors, etc.

Conforming with Underwriters' requirements these transformers are furnished with sub-base and separable attachment plugs. They are made in variegated capacities to suit all requirements of the electrical toy trade. Packed in attractive cartons.

No. 870, 50 Watt

Fifty watt capacity with a secondary voltage of 3 to 18 in three volt steps. Voltage is controlled at will by moving switch lever, without change of binding posts. It will operate the "O" gauge small trains, and the smaller size airplanes, motors, etc.

No. 871, 75 Watt

Same design as No. 870 but has twice the capacity and greater voltage range. (3 to 24 in 3-volt steps). Operates the average toy train on both "O" and standard tracks. Is recommended for use where No. 870 might lack in capacity.

No. 871

No. 872, 100 Watt

The No. 872 is the best in its field. Has a variable secondary voltage from 2 to 30 in two volt steps which is controlled *without* changing binding post connections. Permanent voltage for lights, signals, etc., 6 and 14.

SCHEDULE T

No.	Watts	Weight lbs.	List Price
870	50	3½	$ 4.25
871	100	6	7.10
872	150	7½	10.60

Nos. 870, 871, and 872 are for 110-120 volts, 60 cycle, alternating current.
Add 20% to list for 25 and 40 cycles.
* Carried in stock.

NEW No. 81 DIXIE ANNUNCIATOR

Hand Reset, Surface Type, Standard Finish Black Oak No Extra Charge

Requires 6 Volts D. C. or 8 Volts A. C. at the Annunciator

A NEW design, all metal case, finely finished and well proportioned. The No. 80 Drop used in this annunciator is absolutely locked in place and cannot be released by shaking or jarring. The indication is black on a white background, the cards being changeable. The audible signal is a specially designed buzzer. Each annunciator packed in separate carton. Engineering data page 60.

No. 81

SCHEDULE E **STANDARD PACKAGE—5 ASSORTED**

No. of Drops	Arrangement		Dimensions			†Weight	List Price
	Across	Down	H.	W.	D.		
*2	2	1	4¾	6⅞	2⅞	3 lbs.	$ 9.96
*3	3	1	4¾	6⅞	2⅞	3 lbs.	11.58
*4	4	1	4¾	6⅞	2⅞	3 lbs.	13.18
*6	3	2	7	6⅞	2⅞	4 lbs.	16.56
*8	4	2	7	6⅞	2⅞	4 lbs.	19.58
*10	5	2	7	8⅜	2⅞	5 lbs.	22.96
*12	6	2	7	9⅞	2⅞	5 lbs.	26.16

13 to 55 drops, add for each drop over 12.....$2.20
56 and over, add for each drop over 12..... 2.84

NEW No. 91
SAN FER ANN ANNUNCIATOR

Hand Reset, Surface Type, Standard Finish White Enamel Mahogany No Extra Charge—Special Finishes, Page 39.

Requires 6 Volts D. C. or 8 Volts A. C. at the Annunciator

A new all metal case of pleasing symmetrical design with exactly the same mechanism as the No. 81 Dixie Annunciator above. Each annunciator packed in separate carton. Engineering data page 60.

No. 91

SCHEDULE E **STANDARD PACKAGE—5 ASSORTED**

No. of Drops	Arrangement		Dimensions			†Weight	List Price
	Across	Down	H.	W.	D.		
*2	2	1	4¾	6⅞	2⅞	3 lbs.	$13.16
*3	3	1	4¾	6⅞	2⅞	3 lbs.	14.94
*4	4	1	4¾	6⅞	2⅞	3 lbs.	16.56
*6	3	2	7	6⅞	2⅞	4 lbs.	19.58
*8	4	2	7	6⅞	2⅞	4 lbs.	22.96
*10	5	2	7	8⅜	2⅞	5 lbs.	26.26
*12	6	2	7	9⅞	2⅞	6 lbs.	29.44

13 to 55 drops, add for each drop over 12.....$3.00
56 and over, add for each drop over 12..... 6.40

* Carried in stock.

† Approximate, per article in shelf package.

No. 215 FLUSH ANNUNCIATOR

Hand Reset, Flush Type, Metal Trim. Standard Finish Black, Mahogany or Oak No Extra Charge. See Page 19 for Special Finishes
Requires 6 Volts D. C. or 8 Volts A. C. at the Annunciator

The No. 80 Drop is used in this annunciator. The audible signal is a Lungen buzzer. Mechanism is in a metal case, to which metal trim is securely fastened. Price includes steel wall box. Engineering data page 60. Special voltage and resistance page 58.

No. 215

SCHEDULE T

No. of Drops	Arrangement		Dimensions			†Weight	List Price
	Across	Down	H.	W.	D.		
4	4	1	6 3/8	9 3/8	3 7/16	5 lbs.	$ 60.00
6	3	2	8 5/8	9 3/8	3 7/16	6 lbs.	66.00
8	4	2	8 5/8	9 3/8	3 7/16	7 lbs.	72.00
10	5	2	8 5/8	10 3/4	3 7/16	7 lbs.	78.00
12	4	3	8 5/8	12 3/8	3 7/16	9 lbs.	86.00
16	6	3	10 7/8	12 1/4	3 7/16	13 lbs.	102.00
20	5	4	14 1/8	10 3/4	3 7/16	15 lbs.	118.00
24	6	4	14 1/8	12 1/4	3 7/16	17 lbs.	134.00

Additional drops.....Each $5.00

No. 83 SPRINKLER ANNUNCIATOR

Metal Case, Hand Reset, Black Finish
Requires 6 Volts D. C. or 8 Volts A. C. at the Annunciator

SPECIAL drops are used in this annunciator having a double set of contact clips, one set to short the drop magnet out of the circuit in operation, and the other set to act as a relay to give the current a free path to the bells. With this arrangement the supervisory system may be laid out so that the operation of certain sprinkler heads will operate individual bells, section bells, or any arrangement that is desired. Engineering data page 60.

No. 83

SCHEDULE T

No. of Drops	Arrangement		Dimensions			†Weight	List Price
	Across	Down	H.	W.	D.		
4	4	1	5 1/4	8 7/8	2 7/8	3 lbs.	$35.34
6	3	2	8	7	2 7/8	4 lbs.	45.60
8	4	2	8	8 7/8	2 7/8	4 lbs.	56.50
10	5	2	8	11	2 7/8	5 lbs.	69.72
12	6	2	8	12 3/4	2 7/8	5 lbs.	82.96

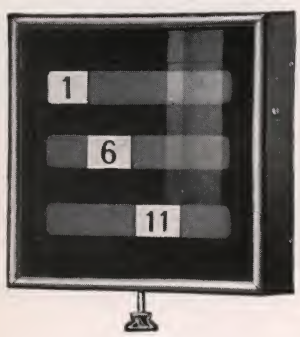
13 to 55 drops, add to list per drop.....$6.72
56 and over, add to list per drop..... 7.34
No. 156 Monitor Bell mounted on case unless otherwise specified.

No. 807 HIGH VOLTAGE ANNUNCIATOR

Hand Reset, Surface Type Metal Case, Standard Finish Black

THE 110 Volts and 220 Volts D. C. or A. C. are Standard. Other voltages on application. Has a metal case with double micarta backboard on which are mounted the No. 80 drops. Great care has been given to the insulation of all current carrying parts, eliminating all materials affected by heat or moisture. The price includes a No. 100 3″ Recti Bell which may be installed adjacent to the annunciator or where desired. The annunciator is wired with marked connectors for this purpose. *For Central Stations* there are usually conditions requiring special features. Photographs and descriptions of annunciators for this service will be sent upon request.

See page 39 for special finishes.



No. 807

SCHEDULE T

No. of Drops	Arrangement		Dimensions			†Weight	110 V. D.C. or A. C. List Price
	Across	Down	H.	W.	D.		
4	4	1	5 5/8	7 3/4	3 1/4	7 lbs.	$ 62.00
6	3	2	7 7/8	6 3/8	3 1/4	8 lbs.	74.00
8	4	2	7 7/8	7 3/4	3 1/4	10 lbs.	91.00
10	5	2	7 7/8	9 3/8	3 1/4	12 lbs.	102.00
12	4	3	7 7/8	10 3/4	3 1/4	14 lbs.	124.00

Additional, add per drop.....$16.00
For 220 Volts add $2.00 list per drop.
† Approximate, per article in shelf package.

ELECTRIC RESET ANNUNCIATORS

Standard Finish Black; Mahogany or Oak No Extra Charge
Requires 8 Volts D. C. or 16 Volts A. C. at the Annunciator

See Page 39 for Special Finishes

AN ALL metal case of pleasing symmetrical design with the best quality of grained wood finish. The new No. 4 Drop used in these annunciators, described on page 29, uses less current and gives a far better indication than any drop heretofore manufactured. The current consumption of the drop both for indicating and resetting is far below the average. The audible signal is a new type double adjustment buzzer. Reset buttons are regularly furnished on case. Connectors only can be furnished without extra charge. Engineering data page 60.

No. 403 Surface Type

SCHEDULE T

No. of Drops	Arrangement		Dimensions			†Weight	List Price
	Across	Down	H.	W.	D.		
4	2	2	6 1/8	5 1/8	3	3 1/4 lbs.	$26.00
6	3	2	6 1/8	6 5/8	3	4 lbs.	32.00
8	4	2	6 1/8	8 1/8	3	5 1/4 lbs.	38.00
10	4	3	8 3/16	8 1/8	3	6 lbs.	44.00
12	4	3	8 3/16	8 1/8	3	6 1/2 lbs.	52.00
16	6	3	8 3/16	11 1/8	3	8 1/4 lbs.	68.00
20	5	4	10 1/4	9 5/8	3	10 lbs.	84.00
24	6	4	10 1/4	11 1/8	3	12 lbs.	100.00

Additional drops, each.....$5.00 list

No. 403

No. 409 Flush Type

Price includes steel wall box

SCHEDULE T

No. of Drops	Arrangement		*Dimensions			†Weight	List Price
	Across	Down	H.	W.	D.		
4	2	2	8 7/8	7	3 7/16	4 1/4 lbs.	$ 60.00
6	3	2	8 7/8	8 1/2	3 7/16	5 lbs.	66.00
8	4	2	8 1/2	10 1/4	3 7/16	6 1/2 lbs.	72.00
10	4	3	10	10 1/4	3 7/16	7 1/2 lbs.	78.00
12	4	3	10	10 1/4	3 7/16	7 3/4 lbs.	86.00
16	6	3	10	13 1/4	3 7/16	10 1/2 lbs.	102.00
20	5	4	12	11 3/4	3 7/16	11 lbs.	118.00
24	6	4	12	13 1/4	3 7/16	12 1/2 lbs.	134.00

Additional drops, each.....$5.00 list

No. 409

No. 413 Desk Type

All sides are fully finished, felt covered bottom.

SCHEDULE T

No. of Drops	Arrangement		Dimensions			†Weight	List Price
	Across	Down	H.	W.	D.		
3	3	1	4	6	3 1/8	3 lbs.	$44.00
4	4	1	4	7 1/2	3 1/8	3 1/2 lbs.	52.00
5	5	1	4	9	3 1/8	4 lbs.	60.00
6	6	1	5 1/2	6	3 1/8	4 1/2 lbs.	68.00
8	8	1	5 1/2	7 1/2	3 1/8	5 1/2 lbs.	84.00

Additional drops, each.....$8.00 list

6 ft. of cord included if specified

* Add 3″ to height and width for trim.

† Approximate, per article in shelf package.

No. 413

ELEVATOR ANNUNCIATORS

All metal cases of pleasing symmetrical design with best quality grained wood or plain color finishes. Audible signal is a new buzzer specially designed for the purpose.

No. 130 Hand Reset

Standard Finish Black; Oak and Mahogany No Extra Charge
Requires 6 Volts D. C. or 8 Volts A. C. at the Annunciator

Special Finishes, Page 39

No. 130

No.130-D

SCHEDULE T **No. 130 STANDARD TYPE AND No. 130D UP AND DOWN TYPE***

No. of Drops	Arrangement		Dimensions—Inches *No. 130			No. 130D*			†Weight, Lbs.		List Price	
	Across	Down	H.	W.	D.	H.	W.	D.	No. 130	No. 130D	No. 130	No. 130D*
3	1	3	11½	3⅝	3¼	...	...	...	1⅞	...	$13.94	.....
4	1	4	13½	3⅝	3¼	...	...	...	2¼	...	15.74	.....
5	1	5	15¾	3⅝	3¼	...	...	...	2¾	...	17.16	.....
6	1	6	17¾	3⅝	3¼	12½	5½	3¼	3½	3¾	18.70	$28.50
7	1	7	20½	3⅝	3¼	...	...	...	4	...	20.26	.....
8	2	4	13½	5	3¼	14½	5½	3¼	4¾	4¾	21.92	31.72
10	2	5	15¾	5	3¼	16¾	5½	3¼	6¼	6¼	24.92	34.70
12	2	6	17¾	5	3¼	18¾	5½	3¼	7	7	28.12	37.92

Additional drops, add per drop.....$4.12 list

*** Up and Down Type**—Care should be taken to order correctly, giving number of *drops, not* number of *floors*, and correct marking for the drops.

No. 414 Electric Reset

Standard Finish Black; Oak and Mahogany No Extra Charge
Requires 8 Volts D. C. or 16 Volts A. C. at the Annunciator

Special Finishes, Page 39

No. 414

No. 414-D

SCHEDULE T **No. 414 STANDARD TYPE AND No. 414D Up and Down Type***

No. of Drops	Arrangement		Dimensions—Inches No. 414			No. 414D*			†Weight, Lbs.		List Price	
	Across	Down	H.	W.	D.	H.	W.	D.	No. 414	No. 414D	No. 414	No. 414D*
4			9¾	3½	3	...	...	...	2½	...	$36.00	.....
5			11¾	3½	3	...	...	...	3	...	39.00	.....
6			13¼	3½	3	8¼	5½	3	3½	3¾	42.00	$52.00
7			15¼	3½	3	...	...	...	4	...	45.00	.....
8	See	See	16¾	3½	3	9¾	5½	3	4¾	5	48.00	58.00
10	note	note	20¼	3½	3	11¾	5½	3	5½	5¾	54.00	64.00
12	below	below	13¼	5½	3	13¼	5½	3	6	6¼	62.00	72.00
14			15¼	5½	3	15¼	5½	3	7½	7¾	70.00	80.00
16			16¾	5	3	16¾	5½	3	8½	8¾	78.00	88.00
18			18¾	5	3	18¾	5½	3	8¾	9	86.00	96.00
20			20¼	5	3	20¼	5½	3	9¼	9½	94.00	104.00

Additional drops, add per drop.....$7.00 list

Arrangement—Up to 10 drops single column of drops. Over 10 drops two columns of drops. D type in two columns, "Up" and "Down."

***Up and Down Type**—Care should be taken to order correctly, giving number of *drops, not* number of *floors*, and correct marking for the drops.

Flush Type—Add $30.00 to list.

* Carried in stock.

† Approximate, per article in shelf package.

No. 813 RAILWAY ANNUNCIATOR

Hand Reset, Surface Type, Metal Case, Mahogany Finish Unless Otherwise Specified

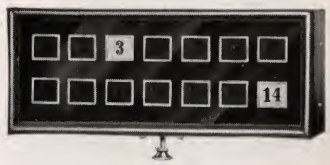
Requires 6 Volts D. C. or 8 Volts A. C. at the Annunciator

Shallow design especially adaptable to sleepers, parlor and dining cars, and standard with many railroads. No. 156 Monitor Bell furnished for mounting where desired.

SCHEDULE T

No. of Drops	Arrangement		Dimensions			†Weight	List Price
	Across	Down	H.	W.	D.		
10	5	2	5½	10¼	2⅝	4½ lbs.	$42.98
12	6	2	5½	11¾	2⅝	5 lbs.	51.60
14	7	2	5½	13¼	2⅝	6 lbs.	60.18
16	8	2	5½	14¾	2⅝	7 lbs.	68.82
18	9	2	5½	16¼	2⅝	8½ lbs.	77.40
20	10	2	5½	17¾	2⅝	10 lbs.	85.90
22	11	2	5½	19¼	2⅝	11¼ lbs.	94.50
24	12	2	5½	20¾	2⅝	12¾ lbs.	102.84

Additional drops, per drop.....$5.50



No. 813
Gravity Drop

No. 1993 WATERTIGHT ANNUNCIATOR

Electric Reset, Surface Type, Cast Iron Case, Standard Finish Black
Requires 6 Volts D. C. or 16 Volts A. C. at the Annunciator

FOR use on ships or places where moisture, fumes, or gases are prevalent. Mounting feet provide a space of ¼″ between the back of the case and the wall on which it is to be mounted, allowing free circulation of air. A rubber gasket between the cover and base make annunciator watertight. Glass is kept in place by waterproof cement.

All drops and connectors are mounted on ebonite backboard secured to the bosses by machine screws. Outside bosses are furnished and will be drilled and tapped to receive ½″ or ¾″ pipe, as may be specified.

Reset connectors only, for remote reset, furnished without extra charge. Prices include 3″ No. 1740 Watertight Bell, which may be mounted where desired.

No. 9193

SCHEDULE T

Drop	†Weight	Up to 30 Volts	80 to 125 Volts
2	7¾ lbs.	$73.00	$ 75.00
3	8 lbs.	76.00	78.75
4	8¼ lbs.	80.00	82.50
5	10¾ lbs.	90.90	97.50
6	11 lbs.	99.00	105.00
Larger sizes, add per	drop	15.00	20.00

† Approximate, per article.

RETURN CALL SYSTEMS

For Dormitories, Small Hotels, Y. W. C. A. and Y. M. C. A. Buildings, etc.

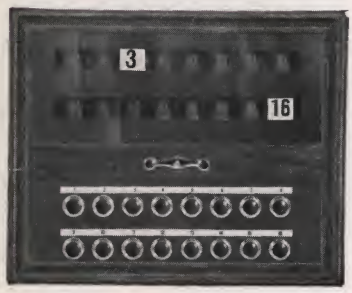
THESE systems are arranged so that the rooms may be called from the office or central station, or vice versa, and the call may be acknowledged. Particular attention is called to the fact that the use of the ordinary type annunciator, push buttons, and bells or buzzers greatly complicates and adds to the expense of the installation; whereas the use of Edwards special return call annunciators and special room stations provides a most efficient system with much less possibility of trouble, fewer wires, and lower installation cost. See engineering data page 58.

No. 10 Hand Reset Annunciator

Surface Type, Standard Finish Black; Mahogany or Oak No Extra Charge

Requires 6 Volts D. C. or 8 Volts A. C. at the Annunciator

See Page 38 for Special Finishes



No. 10

USED in hotels, institutions, etc., for the purpose of calling the room and acknowledging from the room that call has been heard, or vice versa. See page 27, for room stations.

This type of annunciator is designed to eliminate the large number of wires necessary if the standard annunciator, bells, and pushes are used. See wiring diagram page 60. All metal cases of pleasing symmetrical design with highest quality grained wood finishes.

SCHEDULE T

No. of Drops	Arrangement		Dimensions			†Weight	List Price
	Across	Down	H.	W.	D.		
10	5	2	12 5/8	11 1/4	3 5/8	10 lbs.	$ 44.12
12	6	2	12 5/8	12 3/4	3 5/8	11 lbs.	54.44
16	8	2	12 5/8	15 3/4	3 5/8	13 lbs.	70.98
20	7	3	16 5/8	14 1/4	3 5/8	17 lbs.	88.24
24	8	3	16 5/8	15 3/4	3 5/8	21 lbs.	103.30

Additional drops per set of two..... $9.25

For flush type add $10.00 list per annunciator

No. 415 Electric Reset Annunciator

Surface Type, Standard Finish Black; Mahogany or Oak No Extra Charge

Requires 8 Volts D. C. or 16 Volts A. C. at the Annunciator

See Page 38 for Special Finishes

No. 415

FOR the same purpose and use as the No. 10 described above, but with No. 4 Electric Reset drop. The standard arrangement is one reset for every ten drops. In the hand reset annunciator all drops that are down are reset, and the electric reset annunciator allows the individual resetting of each drop where desired. Special Resistance page 58.

SCHEDULE T

No. of Drops	Arrangement		Dimensions			†Weight	List Price
	Across	Down	H.	W.	D.		
12	6	2	12 5/8	12 3/4	3 5/8	12 lbs.	$115.00
16	8	2	12 5/8	15 3/4	3 5/8	14 lbs.	130.00
20	7	3	16 5/8	14 1/4	3 5/8	16 lbs.	145.00
25	9	3	16 5/8	17 1/4	3 5/8	23 lbs.	170.00
30	10	3	16 5/8	18 3/4	3 5/8	25 lbs.	190.00
36	9	4	20 5/8	17 1/4	3 5/8	28 lbs.	218.00
42	11	4	20 5/8	20 1/4	3 5/8	33 lbs.	255.00
49	10	5	24 5/8	18 3/4	3 5/8	37 lbs.	290.00
56	12	5	23 15/16	21 3/4	3 3/4	41 lbs.	320.00
64	13	5	23 15/16	23 1/4	3 3/4	46 lbs.	360.00
72	15	5	23 15/16	26 1/4	3 3/4	52 lbs.	394.00
81	14	6	27 1/4	24 3/4	3 3/4	57 lbs.	436.00
90	15	6	27 1/4	26 1/4	3 3/4	62 lbs.	476.00
100	15	7	30 9/16	26 1/4	3 3/4	69 lbs.	520.00

Additional drops..... $5.40 ea.

For flush type add $10.00 list per annunciator.

† Approximate, per article in shelf package.

RETURN CALL SYSTEMS

Special Voltage and Resistance Page 58

*No. 136 Surface Return Call Station

THIS is designed particularly for installation in existing buildings. Provides a very neat appearing plate mounted on a shallow cast box which provides entrance for conduit or open wires as desired. The audible signal is an Edwards double adjustment Lungen Buzzer, and the station is completely wired for installation with the special Edwards No. 265 Return Call Push. It is suitable for operation with any of the return call annunciators shown on the preceding page.

The cast box is rubberoid black, the plate brushed brass or nickel. For special finishes see page 39.

No. 136

SCHEDULE T

†Weight, 1½ lbs. ..... List Price $4.50
Bakelite plate can be furnished if desired—Additional charge ..... $0.25 list

*No. 137 Flush Return Call Station

A FLUSH plate of pleasing design for mounting on a standard single gang switch box. The audible signal is an Edwards double adjustment Lungen Buzzer, and the station is completely wired for installation with the special Edwards No. 265 Return Call Push. It is suitable for operation with any of the return call annunciators shown on the next page.

Standard finish brushed brass or nickel plate. For special finishes. see page 39.

No. 137

SCHEDULE T

†Weight, ½ lb. ..... List Price $4.00
Bakelite plate can be furnished if desired—Additional charge ..... $0.25 list

No. 138 Indicating Return Call Station

FOR use in college dormitories and other places where it is desirable to leave an indication that a call has been made to the room during the occupant's absence. It fits a standard two-gang switch box. The audible signal is an Edwards double adjustment Lungen Buzzer. The visible signal is a white arrow which is sharply outlined through a small round glass window. One push button is for the return call, the other to reset the indicating arrow. It is suitable for operation with any of the return call annunciators shown on the next page.

No. 138
Indicating Return Call
Push and Buzzer

SCHEDULE T

†Weight, 1 lb. ..... List Price $12.00

*Carried in stock.
† Per article in shelf package.

LAMP ANNUNCIATORS

BULL'S EYE TYPE

EQUIPPED with 5/8" opal signals neatly arranged over card racks. Lamps are easily changed from the front by removing the opals. All metal case and trim. Standard finish brush brass or bronze for flush type; black or mahogany for surface types. Standard operating voltage 16 to 24 volts A. C. or D. C.

The illustration shows the standard method of construction with all mechanism on back of front plate, which is mounted directly on metal wall box. In larger size annunciators particularly, it is advisable for easier installation to have the front plate hinged to a trim which fastens directly to the metal wall box. This method of construction can be followed if specified.

No. 422

OPAQUE GLASS TYPE

FOR use where it is advisable to have indications readable from a distance. The lamps are in individual shield units, and when lighted cause the numerals to show plainly through the opaque glass.

All metal case and trim. Standard finish black or mahogany. Standard operating voltage 16 to 24 volts A. C. or D. C. Made in two styles, for 7/8" numerals or 1¾" numerals.

OPERATION

IF LOCKING pushes, toggle or push button switches are used, the lamps will remain lighted while the switch is on and will be extinguished while the switch is off. If standard momentary contact pushes are used, relays are supplied in a *separate* case with the reset button on the annunciator. If specified, relays can be mounted in the annunciator case, which, however, adds greatly to its size and does not improve its appearance.

CATALOG NUMBERS

Bull's eye type for surface wall mounting	No. 421
Bull's eye type for flush wall mounting	No. 422
Bull's eye type for desk	No. 423
Opaque glass type for surface wall mounting	No. 424
Opaque glass type for flush wall mounting	No. 425

Be Sure to specify operating voltage; finish; with or without relays; if with relays, whether they are to be in separate case or in annunciator; if opaque glass type, whether 7/8" or 1¾" numerals.

No. 424

LIST PRICES

BULL'S EYE TYPE — **SCHEDULE T**

No. of Signals	List Price	No. of Signals	List Price	No. of Signals	List Price
2	$40.00	10	$ 96.00	20	$196.00
4	46.00	12	116.00	24	215.00
6	66.00	14	136.00	28	234.00
8	81.00	16	156.00	32	253.00
		18	176 00		

Add for additional signals, sets of two	$ 9.50 list
Add for hinged front, 2 to 25 signals	25.00 list
Over 25 signals	40.00 list
Add for relays, per signal	8.00 list

For special finishes, see page 39.

OPAQUE GLASS TYPE—7/8" NUMERALS — **SCHEDULE T**

No. of Signals	List Price	No. of Signals	List Price	No. of Signals	List Price
4	$ 48.00	12	$120.00	20	$200.00
6	69.00	14	140.00	24	240.00
8	85.00	16	160.00	28	280.00
10	100.00	18	180.00	32	320.00

Add for additional signals, per set of two	$10.00 list
Add for 1¾" numerals, per signal	1.00 list
Add for 110 Volts, per signal	1.00 list
Add for relays, per signal	8.00 list

SPECIAL ANNUNCIATOR FEATURES

No. 80 Hand Reset Drop Only

As Used in All Hand Reset Annunciators

SCHEDULE T.....**List Price $4.00**

No. 4 Electric Reset Drop Only

No. 80 Drop

USED in all electric reset annunciators. An entirely new Principle using much less current for both indicating and resetting. The indication is a white arrow which points directly at the name card. When reset, the arrow drops out of sight behind the name card. The front is of plain glass and as the arrow is between the glass and a dull black background, it can be seen from any angle. The operation is simplicity itself with no springs or contacts. It cannot shake or jar out of adjustment. It is locked in normal position and cannot indicate until current is passed through magnets.

SCHEDULE T.....**List Price $6.00**

AUTOMATIC RESET ANNUNCIATORS. Add to list of annunciator $12.00. All standard electric reset annunciators may be arranged so that any drop in indicating will reset any previous indication.

CLOSED CIRCUIT ANNUNCIATORS. Add $10.55 list per drop to any style hand reset annunciator.

SPECIAL VOLTAGE, up to 24 V. D. C. or A. C. no charge. 25 to 40 V. add per drop.....**$1.00 list**

No. 4 Drop

SPECIAL COMMERCIAL FINISHES other than standard add per annunciator: 4 to 10 drop, **$6.00 list;** 12 to 24 drop, **$8.00 list;** 26 to 52 drop, **$12.00 list;** over 52 drop, **$16.00 list.**

SOLID BRONZE OR BRASS CASES. Add per annunciator: 4 to 10 drop, **$12.00 list;** 12 to 24 drop, **$20.00 list;** 26 to 52 drop, **$30.00 list;** over 52 drop, **$50.00 list.**

INDIVIDUAL RESET with pushes on case, per push.....**$4.00 list**
With terminals only for remote control, per terminal.....**.60 list**

SPECIAL ARRANGEMENT of drops, same addition as for special finishes above.

SPECIAL MARKINGS other than number, per drop.....**$0.30 list**

BELL INSTEAD OF BUZZER.....**3.00 list**

SWITCH on case, 1 or 2 point.....**3.50 list**

PUSH BUTTONS

SCHEDULE E

See Page 39 for Engraving, Special Finishes, etc.

No. 620

*No. 620 Push

FOR 5/8" hole. The result of careful research to provide a more substantial push than any heretofore manufactured. The phosphor bronze contact springs are of novel design, and make positive self-cleaning contact with slight pressure. Pressure on the side of center will not affect the operation, and the center will not stick or turn. The self-forming binding posts take any size wire easily. The push is entirely insulated and may be installed in metal. Pearl center. Standard finish nickel, brass no extra charge.

Standard Package—50.....†Weight 1 lb.....**List Price $0.39**

BLACK CENTERS, Add to list.....**$0.12**

No. 59

*No. 59 Push

For 3/4" hole. Exactly the same construction as the No. 620, but of larger size, having a larger center. Standard finish nickel, brass no extra charge.

Standard Package—50.....†Weight 1½ lbs.....**List Price $0.77**

BLACK CENTERS, Add to list.....**$0.12**

No. 625

*The New No. 625 Colored Center Push

For 5/8" hole. Has a raised center of white, black, red, or blue, but is otherwise exactly the same as the No. 620. White center standard. Center is protrudes and spring is softened. Standard finish nickel, brass no extra charge.

Standard Package—50.....†Weight 1 lb.....**List Price $0.45**

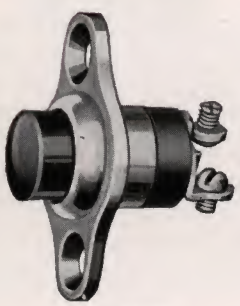
LUMINOUS CENTERS, Add to list.....**$0.50**

No. 621

*No. 621 Push

For 5/8" hole. Has a black composition center that protrudes 3/16" as illustrated. It is an insulated push with phosphor bronze contact springs. Standard finish nickel, brass no extra charge.

Standard Package—1.....†Weight 1 oz.....**List Price $1.40**



No. 622

*No. 622 Push

For ½" hole. Has an escutcheon instead of spring clips, but is otherwise the same as No. 621. Standard finish nickel, brass no extra charge.

Standard Package—1.....†Weight 1 oz.....**List Price $1.45**

No. 63

*No. 63 Push

For ½" hole. Is only 5/8" by 5/8" overall. For installations requiring small dimensions. Pearl center. It is not insulated. Standard finish nickel, brass no extra charge.

Standard Package—50.....†Weight 5/8 lb.....**List Price $0.67**

* Carried in stock.

† Approximate, per std. pkg.

PUSH BUTTONS

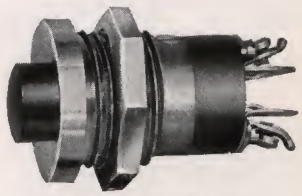
For Engraving, Special Finishes, etc., See Page 39

A Quick Break Push, with Heavy Contacts for Higher Voltage Work

SCHEDULE E **Standard Finish, Nickel—Brush Brass No Extra Charge**

*Cat. No.	Voltage		†Weight ozs.	Std. Pkge.	List Price
85	110	Std. Type, Fits ¾″ hole	1	10	$2.40
85A	220	Std. Type, Fits 1⅛″ hole	3	1	6.20
85P	110	Escutcheon Type, Fits ¾″ hole	3	1	3.15
85AP	220	Escutcheon Type, Fits 1⅛″ hole	5	1	6.95
85L	110	Locknut Type, Fits ⅞″ hole	3	10	2.65
85C	110	Closed Circuit Type, Fits 1⅛″ hole	3	1	7.85
850	...	Hard Rubber Bushing only for No. 85 type	1	1	1.40
850A	...	Hard Rubber Bushing only for No. 85A type	1	1	1 65

No. 85



No. 85L (Lock-Nut)

*No. 260, 4-Contact Push

SO CONSTRUCTED that it will close three circuits at once. It is for use where annunciators, bells, and other devices are to be operated at the same time but it is not desirable to operate them in multiple. By strapping the contacts it is often used on single circuits to obtain the additional current carrying capacity of multiple contacts. Fits ¾″ hole. Fully insulated. Phosphor bronze springs.

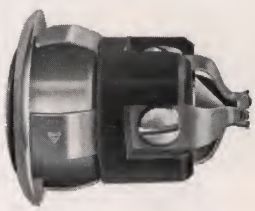
Standard finish, nickel—Brush Brass, no extra charge.
Standard Package—1.....†Weight 2 ozs.....**List Price $1.40**

No. 85P Plate Type

*No. 260-C Push

Closed Circuit. For ¾″ hole. Otherwise the same as No. 260.

Standard finish, nickel—Brush Brass, no extra charge.
Standard Package—1.....†Weight 2 ozs.....**List Price $2.05**

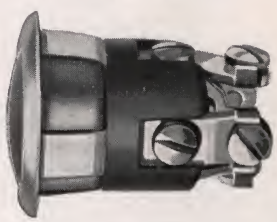


No. 260

*No. 265 Return Call Push

So constructed that it breaks one circuit and makes another circuit. It is used in return call and other systems to save additional wiring.
Standard finish, nickel—Brush Brass, no extra charge.

Standard Package—1.....†Weight 2 ozs.....**List Price $1.90**

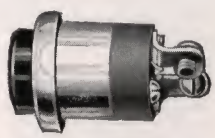


No. 265

*No. 116 Slow Break Push

For ½″ hole. Used in automobile controller handles, etc. Turned from brass rod. Wiping phosphor bronze springs. Condensite center. Contact member molded into condensite.
Standard finish, nickel—Brush Brass, no extra charge.

Standard Package—1.....†Weight 2 ozs.....**List Price $1.30**



No. 116

* Carried in stock.
† Approximate, per article.

PUSH BUTTONS

SCHEDULE E

See Page 39 for Engraving, Special Finishes, etc.

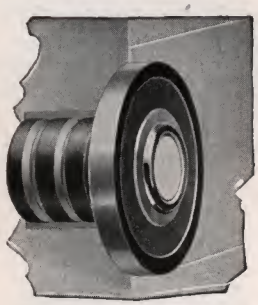
No. 60 or 61

*No. 60 Flush Push Escutcheon

FOR use on plaster or where larger than the midget push is required. The iron plate is first secured to the wall. There being a number of screw holes, it is always possible to engage a lath. The brass plate is then placed over the iron plate and the push button pressed into place. The spring clips on side of button grip the iron plate securely, holding the button and top plate in place. Standard finish nickel, brass no extra charge.

***No. 60** is for ⅝″ push; ***No. 61** is for ¾″ push.

Standard Package—25.....†Weight 12 ozs.....**List Price $0.30**

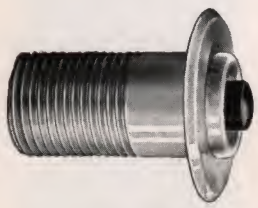


No. 261

*No. 261 Stone Escutcheon

A plain flanged casting for cementing into stone or tile work. Drilled for ¾″ push. The No. 260 is recommended. Standard finish Bauer Barff.

Standard Package—1.....†Weight 8 ozs.....**List Price $3.50**



No. 262

*No. 262 Conduit Push

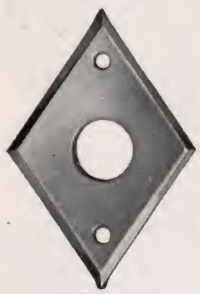
FURNISHED complete with attachment as illustrated, to fit ½″ conduit. The attachment is so made as to allow the installation to be vapor proof and is used by hotels and apartment houses for bathrooms, etc. Inside the threaded brass pipe is a vertical rod which enables the attachment to be screwed on to conduit with a pair of pliers, piece of slotted pipe, etc., eliminating the use of a Stillson wrench which would mar the surface. A special adaptation of the No. 621 push, with a wider flange and other features arranged for this attachment, is used. This push is numbered 621-C. Standard finish nickel, brass no extra charge.

No. 262 CONDUIT PUSH (COMPLETE)

Standard Package—1.....†Weight 4 ozs.....**List Price $3.70**

No. 621-C (PUSH BUTTON ONLY)

Standard Package—1.....†Weight 2 ozs.....**List Price $2.00**



No. 157D

*No. 157 Plates

DIAMOND or square. For ⅝″ or ¾″ push. Bevel edge, drilled for one button. No. 157-D (diamond) size between points is 2⅛″ x 3 1/16″. State when ordering the size push to be used. No. 157-S (square) size 1⅞″. State size of push to be used. Assortment permitted to make standard package. ⅝″ hole furnished unless otherwise specified. Standard finish nickel, brass no extra charge.

Standard Package—10.....†Weight 1⅞ lbs.....**List Price $0.50**

No. 158

*No. 158 Switch Box Plate

FOR standard switch box. Drilled for 1, 2, or 3 buttons ⅝″ and 1 or 2 buttons ¾″. Screw hole centers 3 9/32″. Machine screws furnished. Price does not include buttons. In ordering state size of buttons to be used. ⅝″ hole will be drilled if not specified. Standard finish of metal plate—nickel, brass no extra charge.

METAL PLATE—Standard Package—1.....†Weight 2 ozs. { **1-Button—List Price $0.35** / **2-Button—List Price .50** / **3-Button—List Price .75**

BAKELITE PLATE—Standard Package—1.....†Weight 2 ozs.....**Additional $0.25 List**

* Carried in stock.

† Approximate, per standard package.

BRONX PUSHES

New and Numerous Designs

Edwards **Bronx Pushes** are of the all-metal, one-piece type. Packed, with screws, in individual boxes for convenient shelf use. They are of excellent construction, well insulated, and it will be seen that the eleven styles cover all general needs.

SCHEDULE E

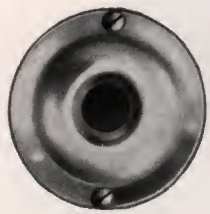
*Cat. No.	Size	Std. Pkg.	Weight	List Price Each
600	2¼″ Diameter	100	7¾ lbs.	$0.18
601	2¼″ x 2¼″	50	5 lbs.	.35
602	2″ x 4⅜″	50	8½ lbs.	1.00
603	1¾″ Diameter	100	5 lbs.	.18
604	1 9/16″ x 3 5/16″	50	5 lbs.	.35
605	1⅛″ x 3¼″	50	3¾ lbs.	.35
606	1⅜″ x 2⅜″	50	3½ lbs.	.25
607	2″ x 2½″	50	5 lbs.	.35
608	2″ x 4 1/16″	50	8 lbs.	.40
609	2″ x 4½″	50	8 lbs.	.40
610	1 9/16″ x 6¾″	10	1 lb.	1.75

STANDARD FINISH: Satin brass.

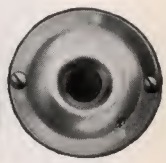
OXIDIZED COPPER: Add $0.05 each list.

ALL OTHER COMMERCIAL FINISHES: Add $0.10 each to list.

SATIN BRASS AND OXIDIZED COPPER can be shipped from stock.

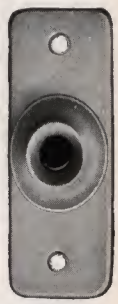


No. 600



No. 603

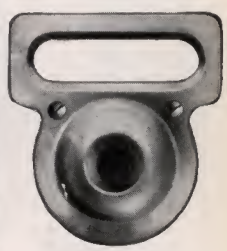
No. 606



No. 605

No. 610

No. 607



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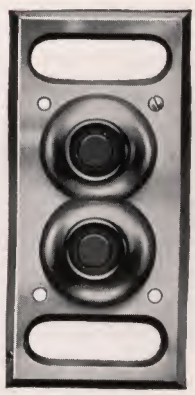

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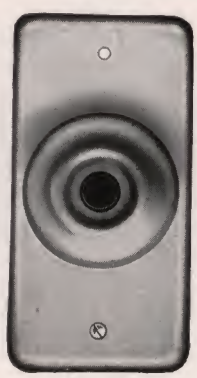

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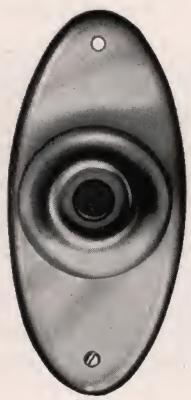


No. 609

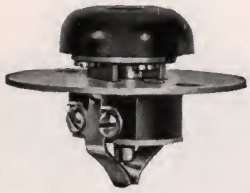
No. 604

* Carried in stock.

PUSH BUTTONS, ETC.

SCHEDULE E

See Page 39 for Engraving, Special Finishes, etc.



No. 235

*New No. 235 Combination Floor Push

SMALLER, lower and sturdier than the old style, with center pin closing circuit at a fixed location and an attachment plug for extension of the circuit to floor tread or table clamp. Plug will not fit any of the standard lighting-circuit receptacles, thus preventing the possibility of shorting the lighting line. Standard finish brush brass.

Standard Package—10.....†Weight 3 ozs.....**List Price $0.78**

No. 158-235

*No. 158-235 Wall Plate and Plug

Fits standard switch box. Standard finish brush brass, nickel no extra charge.

Standard Package—1.....†Weight 5 ozs.....**List Price $1.60**

No. 204

*No. 204 Wall Plate

With plug and push. Fits a standard switch box. Equipped with No. 620 push and No. 235 detachable extension plug. Six feet of flexible cord with pear push attached, furnished if specified, for which add to list $1.75. Standard finish brush brass, nickel no extra charge.

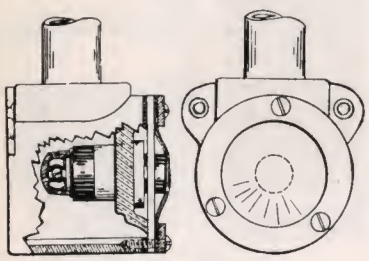
Standard Package—1.....†Weight 6 ozs.....**List Price $3.00**

No. 1786

*No. 1786 Watertight Push

For surface mounting. Cast case, polished bronze finish. Of the slow break type suitable for low voltage. Rubber gaskets make case watertight. Pigskin diaphragm covers center. Silver contacts.

Standard Package—1.....†Weight 8 ozs.....**List Price $3.50**



No. 1785

*No. 1785 Watertight Push

For 125 volts or less, conduit type. Cast case, black finish. Rubber gaskets between box and case and top ring. Pigskin diaphragm covers the center. Drilled and tapped for ½″ or ¾″ conduit if specified. Has cast mounting feet.

Standard Package—1.....†Weight 1½ lbs.....**List Price $7.50**

* Carried in stock.
† Approximate, per article.

PUSH BUTTONS, ETC.

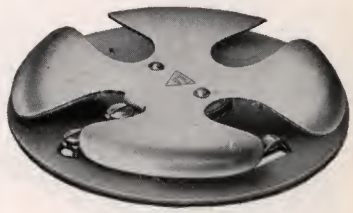
SCHEDULE E

See Page 39 for Engraving, Special Finishes, etc.

*No. 290 Dixie Floor Tread

CONTACT easily made by pressure at any point. Cord enters through brass strap which holds it securely. One wire goes around fibre to upper plate and one around other side to lower plate. The connectors are firm and reliable and the whole device is designed for quick, easy installation. Each tread packed in separate box. Finish brush brass.

Standard Package—10 ..... †Weight 5 ozs..... **List Price $1.50**



No. 290

*No. 206 Table Clamp

May be used in connection with floor push or wall plug. A self-contained unit with button and contact built into spring clamp base. Contacts open to inspection, self-cleaning and phosphor bronze. Wire connections easily made. Standard finish nickel.

Standard Package—10 ..... †Weight 3 ozs..... **List Price $1.05**

*No. 67 Bakelite Pear Push

Keeps its fine finish indefinitely, will not warp, check or crack. Equipped with No. 620 push. For protruding center push add $0.05 list.

Standard Package—10 (one color):

No. 67—Black or mahogany ..... **List Price $0.50**
No. 67—White enamel..... **List Price .65**

No. 206

No. 67

*No. 68 Metal Pear Push

Equipped with No. 620 button. Standard finish nickel, brush brass, no extra charge.

Standard Package—10 ..... †Weight 2 ozs..... **List Price $0.70**

*No. 173 Multiple Push

Equipped with No. 63 Push. Standard finish oak, mahogany no extra charge.

No. of Buttons	Std. Pkg.	†Weight	List Price Without Cord	With 6 Ft. of Cord Attached
*2	1	3 ozs.	$ 4.45	$ 5.77
*3	1	4 ozs.	5.80	7.56
*4	1	4 ozs.	7.20	9.40
*5	1	5 ozs.	9.25	11.89
*6	1	5 ozs.	11.55	14.63
7	1	6 ozs.	14.00	17.52
8	1	6 ozs.	16.35	20.31

No. 68

No. 173

* Carried in stock.
† Approximate, per article.

No. 197 Bakelite Desk Push

THE new **All Bakelite** directory push is a distinct advance in design and construction. It is much smaller in size and will maintain its beautiful lustre indefinitely. The interior mechanism remains unchanged, with phosphor bronze scraping contacts and all parts fully insulated.

COLORS

The standard color is black. Mahogany or oak can be furnished without extra Charge. It must be remembered that the directory push is always *on a desk*, and for that purpose black is most serviceable. It is a neutral color, and will harmonize with mahogany, oak, green, or any furniture finish. It also looks well with the desk telephone which is black, and alongside of which it is usually placed.

CODED CORD

Directory pushes are furnished in individual boxes, with or without cord. The advantage of ordering these pushes with six feet of cord already attached is easily seen in that coded cord is used and each push plainly tagged with the color code. This allows a quick installation without the necessity of dismantling the block, skinning and connecting wires, reassembling the block, and then testing out each wire to determine the button to which it is connected.

No. 197 Bakelite Desk Push

SCHEDULE E **STANDARD PACKAGE—5 ASSORTED**

Standard Color—Black; Oak or Mahogany—no extra charge.

*No. of Buttons	†Weight	Without Cord	With 6 Feet of Cord Attached
1	3 ozs.	$3.50	$ 4.04
2	3 ozs.	4.75	6.07
3	4 ozs.	6.00	7.76
4	5 ozs.	7.25	9.45
5	6 ozs.	8.50	11.14
6	7 ozs.	9.75	12.83

For larger sizes, see No. 190.

No. 190 Wood Desk Push

THIS push is equipped with very substantial connectors having formed ears to prevent wire from slipping or spreading. Button head screws are upset and cannot come out. Phosphor-bronze scraping contacts. All current-carrying parts insulated. Weighted, and felt covered base. Standard finish oak and nickel; mahogany and brass no extra charge. Black buttons.

No. 190 Desk Push

SCHEDULE E **STANDARD PACKAGE—5 ASSORTED**

*No. of Buttons	List Price Without Cord	With 6 Ft. Cord Attached	†Weight	*No. of Buttons	List Price Without Cord	With 6 Ft. Cord Attached	†Weight
1	$3.90	$ 4.44	6 ozs.	6	$10.80	$13.88	13 ozs.
2	5.30	6.62	8 ozs.	8	13.70	17.66	16 ozs.
3	6.60	8.36	10 ozs.	10	16.40	21.24	19 ozs.
4	8.10	10.30	11 ozs.	12	20.25	25.97	21 ozs.
5	9.40	12.04	12 ozs.				

No. 191 Directory Plate

No. 191 Directory Plate

Without wood mat, for flush mounting in desk or wall. Standard finish nickel plate, brush brass no extra charge. Same prices as No. 190 above.

* Carried in stock.
† Approximate per standard package.

No. 195 Combination Desk Push and Buzzer

SAME as the No. 190 except that a buzzer is included *within* the push itself. Advantages are as follows: Eliminates extra wiring for buzzer. No screws to mar desks or tables. Makes wiring simpler. Plate is neatly perforated to allow free emission of sound. Standard finish black. Mahogany or oak no extra charge. Ideal for offices, or banks, where user calls several persons but only one calls him.

SCHEDULE T

No. of Buttons	List Price Without Cord	With 6 Ft. Cord Attached	No. of Buttons	List Price Without Cord	With 6 Ft. Cord Attached
1	$ 7.85	$ 8.39	6	$14.75	$17.83
2	9.25	10.57	8	17.65	21.61
3	10.55	12.31	10	20.35	25.19
4	12.05	14.25	12	24.10	29.82
5	13.35	15.99			

For larger sizes, add per button $5.95
For flexible cord only, per foot per conductor ..... $0.08 list
Over 100 ft., per foot per conductor ..... .06 list

No. 195

There must be two more conductors than buttons for the No. 195 instead of one more as for the No. 190.

No. 193 Dial Push

This push is a hollowed wood block, round, with removable weighted base, felt-covered to protect polished surfaces. Flush midget pushes are used with numbers directly at side of each. A very attractive push for desk or table use. Finish oak or mahogany, metal parts nickel, dial silver finish, black numbers.

SCHEDULE E **STANDARD PACKAGE—5**

*No. of Buttons	List Price Without Cord	*With Cord Attached	†Weight	*No. of Buttons	List Price Without Cord	*With Cord Attached	†Weight
1	$2.00	$2.54	4 ozs.	5	$3.50	$6.14	12 ozs.
2	2.30	3.62	8 ozs.	6	3.90	6.98	12 ozs.
3	2.60	4.36	12 ozs.	8	4.80	8.76	16 ozs.
4	3.05	5.25	12 ozs.	10	6.50	11.34	16 ozs.

* Six feet of silk covered cable.

No. 193

No. 147 Push Button Block

A TWO-PIECE separable wood block, front hollowed out to provide space for connections. Back is solid and felt protected. Prices do not include push buttons. The No. 620 should be ordered for ⅝″ hole (size A), and the No. 59 for ¾″ hole (size B). When not specified the size A hole will be drilled. Engraving (see page 39). Standard finish oak or mahogany; special finishes page 39.

SCHEDULE E **STANDARD PACKAGE—10 ASSORTED**

*No. of Buttons	List Price No. 147	†Weight	*No. of Buttons	List Price No. 147	†Weight
1	$1.25	2 ozs.	6	$4.15	7 ozs.
2	1.70	3 ozs.	8	4.85	8 ozs.
3	2.05	4 ozs.	10	6.10	9 ozs.
4	2.40	5 ozs.	12	7.40	10 ozs.
5	3.45	6 ozs.			

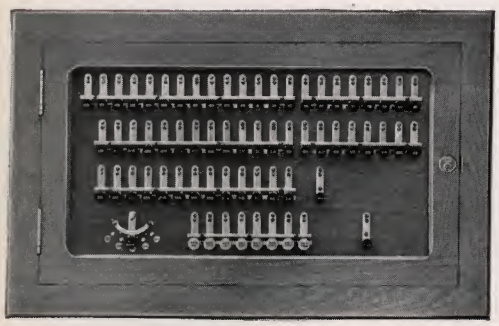
Larger sizes add per button $0.62 list.
No. 147 weighted add per button $0.46 list.

* Carried in stock.
† Approximate, per article.

No. 147

PUSH BUTTON PLATES and KEYBOARDS

No. 109 Flush, Hinged Panel



No. 109

IS USED in schools and other public institutions for the purpose of ringing bells in all rooms, playgrounds, etc., individually, and is so arranged that one key operates *all* bells for general signal, etc. All keys are mounted on the panel which is hinged to the trim and equipped with a concealed Yale Lock. It is furnished completely connected with flexible cord running from the keys to *marked* terminals mounted on a wood backboard. This backboard may be screwed directly onto the back of the wall box. The size of the panel, which depends on the number of keys and the arrangement, will be given upon receipt of rough sketch showing details. Standard finish oak or mahogany. To arrive at price, figure the total number of keys, including the "ALL" key. Price includes the metal wall box and engraving on each key as specified.

SCHEDULE T

10 Keys or less	**$75.00 list price**
Each additional key	**7.00 list price**

No. 110

No. 110 Push Button Plate

BRASS front with wood back and metal wall box. Used in schools, office buildings, public buildings and hospitals. Furnished completely wired to a connecting block in the back box. May be had with card racks or with engraving under each push, and may also be had with an "ALL" button to call all stations or ring all bells at once. Dimensions which depend on the number of pushes and desired arrangement, will be given immediately upon request.

Standard finish, brush brass; nickel, no extra charge. For other commercial finishes add 10% to list. Prices include metal wall box.

SCHEDULE T

WITH "ALL" PUSH

To arrive at price, figure the total number of pushes, including the **"ALL"** push.

With Card Racks	**$4.35 list per push**
With Engraving	**5.00 list per push**

WITHOUT "ALL" PUSH

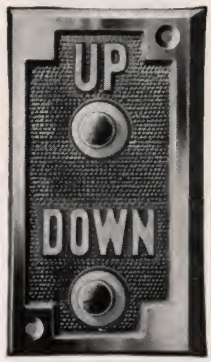
With Card Racks	**$4.10 list per push**
With Engraving	**4.50 list per push**

No. 159 Elevator Call Button

Designed for use with EDWARDS annunciators or any standard make. Case is iron finished in black, for surface mounting. Other commercial finishes plus 50%. As illustrated, has "Up" and "Down" button.

SCHEDULE T

	†Weight	List Price
* No. 159	1⅝ lbs.	$6.00
* No. 159U (Up only)	1⅝ lbs.	5.00
* No. 159D (Down only)	1⅝ lbs.	5.00
* No. 159X (Plain)	1⅝ lbs.	5.00



No. 159

*No. 117 Foot Push

Case is cast brass with rubber gasket between the case and base which is iron. An additional rubber gasket on the back insulates from the vehicle. The push is moisture proof. Contact and lever springs are phosphor-bronze. Capacity 100 volts or less at ½ ampere. Size 3″ x 3¼″. Finish natural metal.

SCHEDULE T.....**†Weight 1 lb.**.....**List Price $6.00**

SPECIAL PUSH BUTTON FEATURES

SPECIAL FINISHES

BRONX PUSHES—Oxidized Copper add 5 cents each list.

All other special commercial finishes add 10 cents each list.

ALL OTHER PUSHES, PLATES, ETC.:

Add 20% to List Price for:		Add 50% to List Price for:	
Antique brass,	Polished copper,	Gilt,	Antique brass,
Oxidized brass,	Polished steel,	Gold bronze,	Sand blast, old brass,
Mottled copper,	Bauer barff,	Sand blast,	Verde antique,
Oxidized copper,	Acid (statuary) bronze,		Polished silver,
Lemon brass,	Gun metal.		Dull silver,
White or black.			Gold.

SPECIAL WOOD FINISHES. Add 20% to list for any wood finish other than Standard.


No. 117 Foot Push

ENGRAVING

On push button centers and plates 2 or less letters or figures.....**List Price $0.50**

Additional letters or figures.....**List Price $0.25 each**

FLEXIBLE CORD

This can be furnished in brown at $0.08 list per foot per conductor up to 100 ft; over 100 ft., $0.06 list. In ordering, always specify the number of conductors, remembering that there should be one extra conductor for a common battery supply. For instance, an 8-button desk push would need 9-conductor cord.

* Carried in stock.

† Approximate, per article.

DOOR OPENERS

SCHEDULE E

EDWARDS door openers are compact and rugged. Available for use under the most varying conditions and may be installed at a minimum expense. All door openers except No. 1542 may be used on either right or left-hand doors.

Operation: Standard Door Openers are wound for operation on 6 Volts D. C., with the exception of the No. 52 Door Opener which will operate on transformer, but if the door is heavy and pressure against the door opener nosing is great, the characteristics of A. C. may not insure sufficient power for good operation.

The No. 9, No. 154, No. 152, No. 153 can be operated from the 8 Volt Bell Ringing Transformer.

The heavier door openers, No. 48, No. 48A, No. 51, No. 51A, No. 50 and No. 50A, require a heavy duty transformer producing at least 50 Watts, and using the 16 Volt tap.

Air Release Checks: This feature keeps the door opener in the unlocked position after button is pushed, until it is returned to its normal locking position by a trip which operates when door is pushed open. All door openers except Nos. 9 and 52 can be equipped with a release check, for which add to list $2.00.

Resistance: All door openers are 2 ohms standard. All door openers except the No. 9 can be furnished specially wound as follows:

Up to 20 ohms	Add to list $1.00
21 to 50 ohms	Add to list 1.25
51 to 75 ohms	Add to list 1.50
76 to 300 ohms	Add to list 4.00

No. 9

*No. 9 Economy, Mortise Type

Face plate and nosing solid brass. Used extensively for apartments. Fits same size mortise as same shape openers of other manufacturers. Height 3⅝". Depth 1¾". Thickness 1". Nosing openings 1³⁄₁₆". Face plate 5⅞" x 1¼". Special resistance above.

Standard Package—50 ..... †Weight 1 lb ..... **List Price $2.70**

No. 152

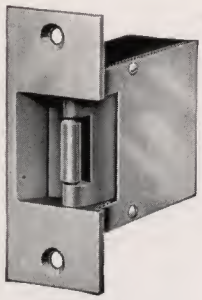
*No. 152, Rim Type

Solid nose. For surface locks, thin frames, etc. Made of cast iron and very substantial. Height 2". Depth 2³⁄₁₆". Thickness 1⅛". Nosing opening 1¼". Special resistance page 58.

Standard Package—10 ..... †Weight 1 lb ..... **List Price $6.00**

Arranged for surface conduit.

Standard Package—1 ..... †Weight 1 lb ..... **List Price $25.00**

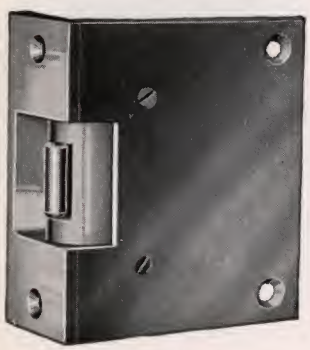


No. 154

*No. 154, Mortise Type

Roller nose. For frames too thin to take a Requires a smaller mortise than the Economy. Height 2". Depth 2⅞". Thickness 1⅛". Nosing opening 1¼". Face plate 1¼" x 3⅜". Finish, brass. Special resistance above.

Standard Package—10 ..... †Weight 1 lb ..... **List Price $5.65**



No. 153

*No. 153, Plate Type

Roller nose. For frames too thin to take a mortise. Brass finish. Height 2". Depth 3⅞". Thickness 1¼". Nosing opening 1¼". Face plate 1¼" x 3⅜". Side plate 3⅜" x 2¾". Special resistance page 58.

Standard Package—1 ..... †Weight 1¼ lbs ..... **List Price $7.00**

* Carried in stock.
† Approximate, per article.

DOOR OPENERS

SCHEDULE E

*No. 1541, Mortise Type

ROLLER nose. Face plate is extended to provide space for mortise for dead bolt. When ordering, a sketch or template must be furnished to show exact location of dead bolt and screw holes. *There cannot be less than* 5/16″ *space* between nosing and dead bolt openings. If no sketch is sent, standard door opener as illustrated will be furnished. Height 2″. Depth 2 7/8″. Thickness 1 1/8″. Nosing opening 1 1/4″. Face plate 1 1/2″ x 6 3/8″. Finish, brass. Special resistance page 58.

Standard Package—1.....†Weight 1 1/4 lbs.....**List Price $10.30**

No. 1541

*No. 48, Mortise Type

Roller nose. Extra heavy, of solid bronze. For places where unusually reliable and durable openers are needed. Height 2 1/4″. Depth 2 5/8″. Thickness 1 7/16″. Nosing opening 1 1/8″. Face plate 1 1/2″ x 3 7/8″. Special resistance page 58.

Standard Package—1.....†Weight 1 3/4 lbs.....**List Price $31.00**


No. 48

*No. 48A

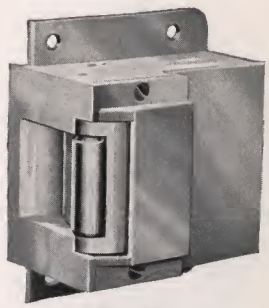
Same as above only dimensions are: Height 2 5/8″. Depth 2 5/8″. Thickness 1 7/16″. Nosing opening 1 1/2″. Face plate 1 1/2″ x 4″. Special resistance page 58.

Standard Package—1.....†Weight 1 3/4 lbs.....**List Price $34.00**

*No. 50, Rim Type

For surface or rim locks, thin frames, etc. An unusually substantial door opener of cast bronze. Height 2 1/4″. Depth 2 5/8″. Thickness 1″. Nosing opening 1 1/8″. Special resistance page 58.

Standard Package—1.....†Weight 2 lbs.....**List Price $31.00**


No. 50

*No. 50A

Same as above except nosing opening is 1 1/2″.

Standard Package—1.....†Weight 2 lbs.....**List Price $34.00**

*No. 51, Plate Type

Roller nose. For frames too thin to take a mortise. Bronze finish. Height 2 1/4″. Depth 2 5/8″. Thickness 1″. Nosing opening 1 1/8″. Face plate 3 3/4″ x 1 1/2″. Side plate 3 3/4″ x 2 7/8″. Special resistance page 58.

Standard Package—1.....†Weight 1 3/4 lbs.....**List Price $34.00**

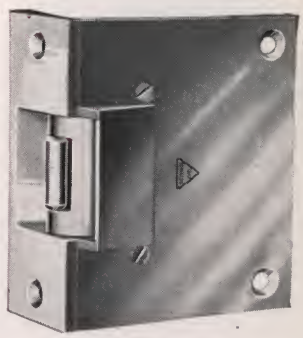
No. 51A

Same as above except that dimensions are: Height 2 1/2″. Depth 2 1/8″. Thickness 1″. Nosing opening 1 1/2″. Plate same as No. 51. Special resistance page 58.

Standard Package—1.....†Weight 1 3/4 lbs.....**List Price $35.00**

* Carried in stock.

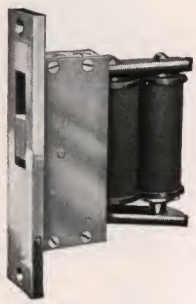
† Approximate, per article.


No. 51

DOOR OPENERS

SCHEDULE E

*No. 52 Mortise Type for Sliding Doors



No. 52

Solid nose. Height 3½″. Depth 3¼″. Thickness ⅞″. Nosing opening ½″ x ¾″. Face plate 1″ x 5½″. Finish, bronze. Special resistance page 58.

Standard Package—1.....†Weight 1¾ lbs.....**List Price $38.00**

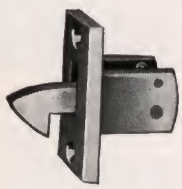
*No. 239, Latch (for above)

Standard Package—1.....†Weight 5 ozs.....**List Price $3.50**

DOOR SWITCHES

SCHEDULE E

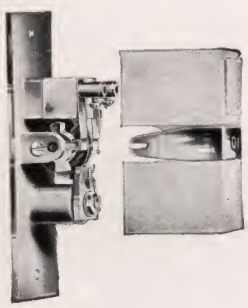
*No. 174 Eco.



No. 239

For use with bank vaults, closets, toilets, and any places where lights are to be turned on and off automatically by the opening and closing of a door. Finish, polished brass. Operation:

Door **shut**	Light **off**
Open door	Light **on**
Enter and close door	Light **stays on**
Open door for exit	Light **off**
Shut door	Light **stays off**



No. 174

Standard Package—12.....†Weight 11 ozs.....**List Price $8.50**

*No. 2000 Conduit Boxes

Especially Designed for the Above

Standard Package—10.....†Weight 12 ozs.....**List Price $1.25**

* Carried in stock.
† Approximate, per article.

RELAYS

Current Consumption Etc. Page 61

Open Circuit Relays

STANDARD: no current in magnets normally. Contacts normally open. When current flows into magnets armature is attracted and closes contacts.

If specified, contacts can be arranged normally *closed*, and to *open* when current flows through magnets.

No. 240

Closed Circuit Relays

STANDARD: current flowing through magnets normally. Contacts normally open. When current *ceases* to flow through magnets, armature drops and contacts are *closed*.

If specified, contacts can be arranged normally *closed*, and to *open* when current ceases to flow through magnets.

In Ordering Relays, the following questions should be answered to assure proper resistance of magnets and correct contact design:

1. What will operating voltage be? A. C. or D. C.?
2. What voltage and amperage will contacts have to handle? A. C. or D. C.?

No. 240 D. C. Relay

CARBON contacts, capacity 25 amperes. For operation on 6 to 250 V. D. C., open or closed circuit. Can be arranged to open or close up to 4 separate circuits at once with current capacity of not over 10 amperes per circuit. (Price on application.) Mounted on slate base in iron box with knockouts. This relay is sturdily designed for hard service. Its operation is smooth and positive. Used in fire alarm control panels and for handling heavy loads where push button or remote control is desired.

SCHEDULE T

Standard No. 240.....Weight 9½ lbs.....**List Price $70.00**

No. 242 A. C. Relay

No. 242

CARBON contacts, capacity 25 amperes. For operation on 18 to 250 V. A. C., open or closed circuit. Can be arranged to open or close 4 separate circuits at once with current capacity of not over 8 amperes per circuit. (Price on application.) A dependable A. C. relay that overcomes the failings of most relays for A. C. use. There is no hum and the contacts are closed quickly and positively. Used on fire alarm control panels and for handling heavy loads where push button or remote control is desired.

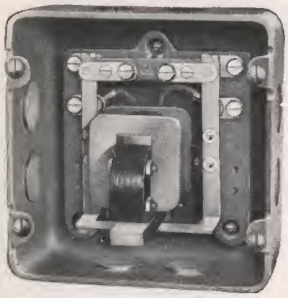
SCHEDULE T

Standard No. 242.....Weight 9½ lbs.....**List Price $40.00**

RELAYS

See General Data on Previous Page

Current Consumption Etc. Page 61



No. 243 Complete

No. 243 Relay for A. C. or D. C.

CARBON contacts, capacity 15 amperes. 18 to 220 volts, 16 to 60 cycles, A. C.; 6 to 220 volts D. C. Can be arranged without extra charge for bridging across standard telephone ringing circuit to operate loud ringing extension bells. Also used for remote control of apparatus or lamps; also for fire alarm control, and for the operation of separate extension circuits. Mounted on composition base in standard square outlet boxes

SCHEDULE T

Standard No. 243 for up to 110 V......Weight 3⅜ lbs.....**List Price $22.50**

Standard No. 243, 111 to 220 V......Weight 3⅜ lbs.....**List Price $27.50**

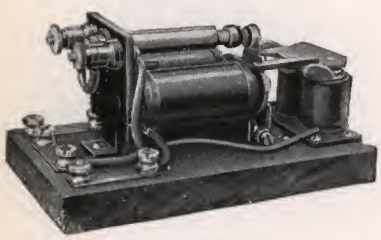
No. 244

No. 244 Sensitive D. C. Relay

Silver contacts, capacity ½ ampere. Designed to operate on very small current demand up to 32 volts D. C., open or closed circuit. Used in better-class burglar alarm work.

SCHEDULE T

Standard No. 244.....Weight 1¾ lbs.....**List Price $15.00**



No. 245

No. 245 D. C. Locking Relay

CARBON contacts, capacity 10 amperes. For 2 button control. Pushing one button causes relay armature to close contacts and latches the armature so contacts remain closed. Pushing second button unlatches the armature, which drops and opens contacts.

This relay is used for remote control of lamp circuits or individual lamps in a lamp annunciator, or to meet a condition that requires the opening or closing of a circuit for an indefinite period. Furnished for operation on 6 to 250 volts D. C. **Open Circuit only.**

SCHEDULE T

Standard No. 245.....Weight 5⅛ lbs.....**List Price $75.00**

BURGLAR ALARM SYSTEMS

Wiring Diagrams Furnished on Application

THE apparatus described herein is manufactured for the purpose of completely protecting homes, apartments, or any building from burglary or other intrusion. Connections may be made to doors, windows, transoms, scuttles, etc. The attachments, technically known as springs, are connected by wire to the burglar alarm proper, called the annunciator, which is usually located where it will be most convenient at night. Electrical current forms the connection between the springs and the annunciator so that any movement such as opening window or door rings an alarm bell and causes an indication to show in the annunciator giving location of the disturbance. The house is usually divided into sections, such as "1st Floor Front," "2nd Floor Rear," etc.

When the alarm is to be set sections of the building that are to be protected at night only are switched to the lower bar. Others, such as "Scuttle," "Wine Cellar," etc., are placed on the upper bar. The small center dial is turned to the right so that the time for disconnection of alarm is under the hour hand of the clock. *The silent test switch* is moved to the left and pressed; if any windows, doors, etc., are not properly closed the location will be shown in the annunciator. If there is an open door or window, close it before proceeding. Then throw *cut-off switch* to point and the house is under protection. By means of the *constant ringing attachment* the bell will ring until turned off at annunciator. The protection is absolute and the additional feeling of security by knowledge (from the silent test) that the house is properly closed, is a feature.

Alarm bells recommended are the No. 100 or No. 222 6″ to 8″. If a lower priced bell is wanted the *Economy No.* 17, same sizes may be used.

The system is usually *operated on six dry cells*. If the lighting circuit be alternating a bell ringing transformer and a *No.* 510 *Transformer Bell* should be used. A servant's call can be provided as a special feature in connection with the setting and disconnection of the alarm.

No. 5 Burglar Alarm Annunciator

Standard eight day, long pendulum clock. Bell, battery silent test and constant ringer.

FINISH, golden oak or mahogany. For special finishes, see page 39.

SCHEDULE T

No. of Sections	Dimensions H.	W.	D.	Open Circuit List Price	Closed Circuit List Price	†Weight
6	21½	12½	5¾	$171.00	$348.25	23 lbs.
8	21½	15	5¾	196.00	411.00	25 lbs.
10	25¼	12½	5¾	219.50	470.50	28 lbs.
12	25¼	12½	5¾	270.00	570.00	30 lbs.
Larger sizes add to list per section.....				8.50	33.50	.....

No. 7 Burglar Alarm Annunciator

Bell, battery, silent test and constant ringer. No clock.

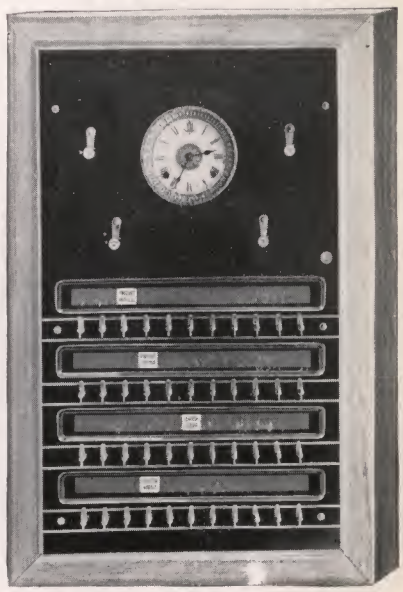
FINISH, golden oak or mahogany. For white enamel finish, see page 39.

SCHEDULE T

No. of Sections	Dimensions H.	W.	D.	Open Circuit List Price	Closed Circuit List Price	†Weight
6	10¼	12½	5¾	$ 94.00	$180.00	15 lbs.
8	10¼	15	5¾	102.00	224.00	17 lbs.
10	14	12½	5¾	108.00	268.00	19 lbs.
12	14	12½	5¾	114.50	306.50	23 lbs.
Larger sizes add to list per section.....				7.75	23.75	.....

† Approximate, per article.

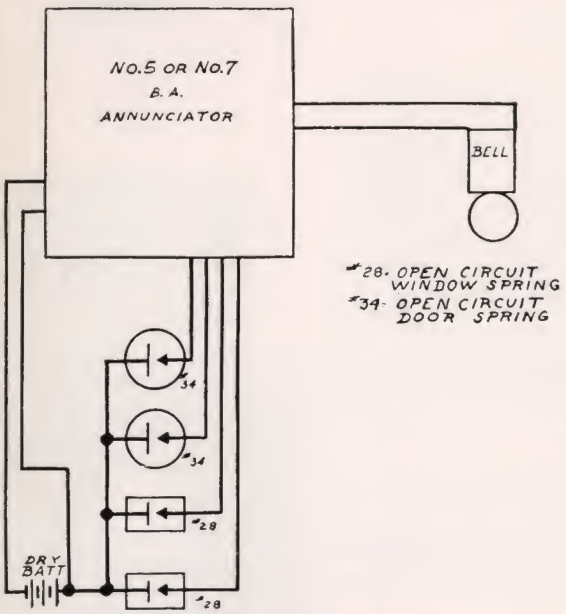
SWITCHES, SPRINGS, ETC., see page 47.



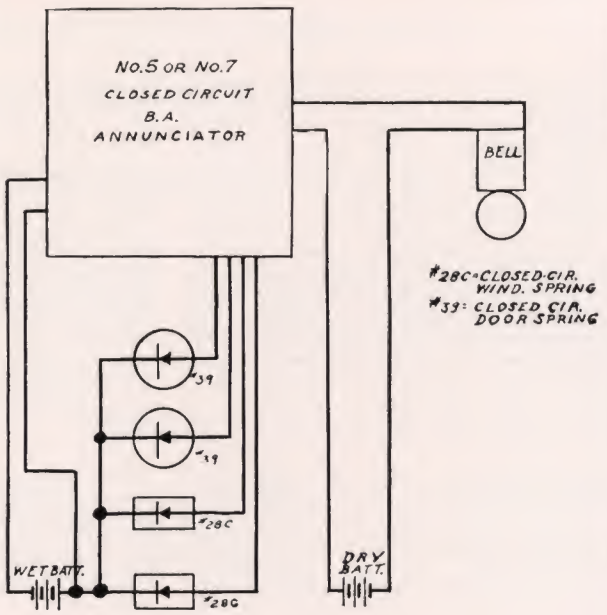
No. 5 Burglar Alarm

The one illustrated is a large size instrument and therefore of somewhat special arrangement. The case style is similar to that furnished as standard.

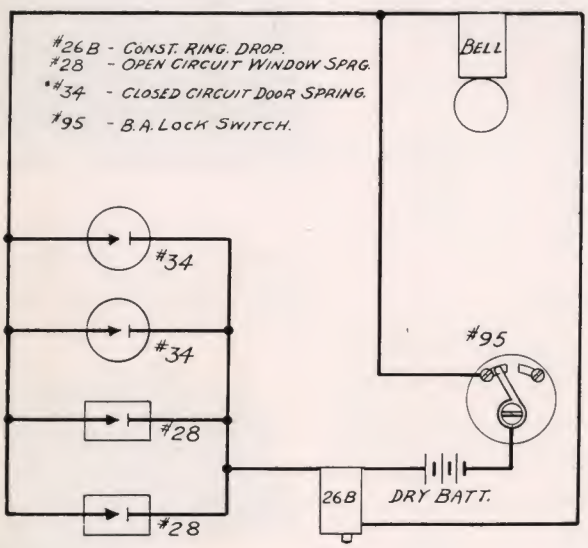
TYPICAL BURGLAR ALARM CIRCUITS



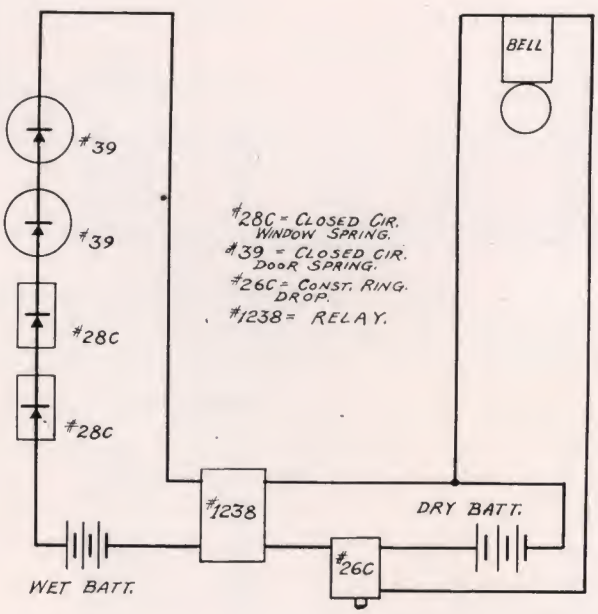
OPEN CIRCUIT SYSTEM
USING NO.5 OR NO.7 ANNUNCIATOR.



CLOSED CIRCUIT SYSTEM
USING NO.5 OR NO.7 C.C. ANNUNCIATOR.



OPEN CIRCUIT SYSTEM
WITHOUT PNNUNCIATOR.



CLOSED CIRCUIT SYSTEM
WITHOUT ANNUNCIATOR.

BURGLAR ALARM SPRINGS

WINDOW springs should be placed in the frame several inches *above* the *lower end* of the *upper sash*—and the same distance *below* the *upper end* of the *lower sash*. Each sash should be *mortised so the nosing of the spring will be set in the recess when the window is closed*. The mortise should be continued (beyond the necessary point) to permit the opening of the window for ventilation. It is advisable (although not necessary) that this system of installation be followed—without the mortise anyone trying to enter the house and knowing of the window springs can very easily open the window gradually, and hold the spring depressed with the finger. The **Edwards** springs when properly used as described are classified as follows:


No. 28


No. 30

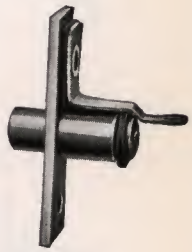
OPEN CIRCUIT WINDOW SPRINGS—nosing in normal position contact is **broken.**

CLOSED CIRCUIT WINDOW SPRINGS—nosing in normal position contact is **established.**

OPEN CIRCUIT DOOR SPRINGS—plunger in normal position contact is **established.**

CLOSED CIRCUIT DOOR SPRINGS—plunger in normal position contact is **broken.**


No. 34


No. 39


No. 236

SCHEDULE E

No.	Open Circuit Springs	Size Plate	◈Std. Package	List Price	†Weight
*28	Window	2½ x 2½	50	$0.54	2¾ lbs.
*30	Window	3⅜ x ⅝	50	.85	5½ lbs.
*32	Transom	2¼ x 1	25	1.55	3½ lbs.
*34	Door	2 x ⅝	50	.35	3 lbs.
*38	Make & Break	2 x ⅝	50	.46	3 lbs.
*236	Door Trip	2 x ⅝	25	1.03	2 lbs.

No.	Closed Circuit Springs	Size Plate	◈Std. Package	List Price	†Weight
*30C	Window	3⅜ x ⅝	50	$1.03	5½ lbs.
*39	Door	2 x ⅝	50	.46	3 lbs.
*32C	Transom	2¼ x 1	50	1.95	3½ lbs.
*42	Safe (no plate)	.....	50	.48	2½ lbs.
*42A	Plate for No. 42	1¾ x ¾	50	.20	1¼ lbs.


No. 32


No. 38

◈Assortment of 100, all styles, all sizes, to make one standard package.

* Carried in stock.

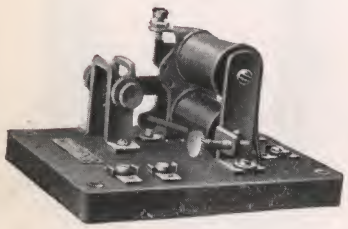
† Approximate, per standard package.


No. 42


No. 42A

*No. 1238 Dixie Relay

SCHEDULE T



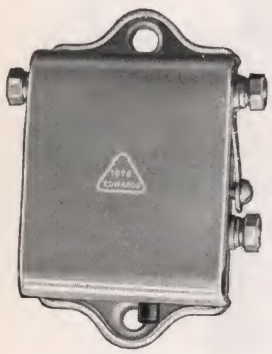
No. 1238

A RELAY designed to meet the exacting requirements of service and having all the necessary features of a pony relay. Can be used for closed or open circuit by merely reversing contact screws. The adjustment is simple and positive. Arrangement has been made so that adjustment, length of break, etc., may be easily observed. Contacts are pure hard drawn silver. Std. Resistance 20 ohms. **Special resistance** Class B 3″ and 4″, page 58.

Weight 1¼ lbs..... **List Price $6.00**

Constant Ringing Drops

SCHEDULE T



No. 26 Drop

ESPECIALLY designed for use on Burglar Alarm systems, see diagram, page 46. It is attached to the main line; the closing of the circuit drops the plunger, thus closing the local circuit and causing the bell to ring continuously until the plunger is pushed into place. The standard drop is the **No. 26B.** In many cases it is desirable to have the drop in operation cut its own magnets out of the circuit. This type is the **No. 26C.** Either type will operate on transformer. **Special Resistance** "Class A," page 58.

***No. 26B**

†Weight ½ lb..... **List Price $2.70**

***No. 26C**

†Weight ½ lb..... **List Price $3.92**

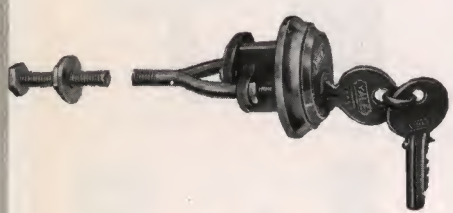
No. 26T is an addition to the present line of constant ringing drops. It is wound to a resistance of 1250 ohms for connection across the ringer terminals of a standard magneto or common battery telephone operating on standard A. C. ringing current of 75 to 90 volts at 16 to 20 cycles.

The No. 26T drop closes a circuit to an auxiliary loud ringing bell, operating on either battery or transformer. The bell continues to ring until drop is reset. Especially adaptable for use in factories, garages, etc., where noise must be contended with, to insure a response to incoming calls.

List Price..... **Each $5.00**

Burglar Alarm Lock Switches

SCHEDULE T



No. 95B

LOCK SWITCHES to be mounted outside the door, so persons having key may enter without giving alarm, see diagram page 46. Polished brass. See lower left diagram on page 46 for connection.

***No. 95,** complete with mounting plate and wood screws.

†Weight ⅜ lb..... **List Price $6.50**

***No. 95A,** two locks. On entering alarm is turned off and after entering turn on inside.

†Weight ¾ lb..... **List Price $13.00**

***No. 95B,** same as No. 95, with rod to go through door, fastened by nuts inside.

†Weight ½ lb. each..... **List Price $7.95**

Extra Keys..... **List Price $0.80**

* Carried in stock.

† Approximate, per article.

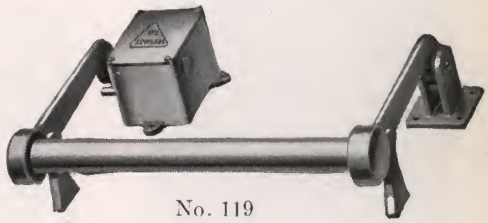
HOLD-UP ALARM DEVICES

SCHEDULE T

*No. 119 Foot Switch

MADE of cast bronze, and sturdily designed so it can be used as a *foot rest* at all times, making its location a matter of habit. To sound the alarm, the foot is slid forward 1 inch, the rail riding up the instep. These are superior to switches designed so the rail must be depressed. No springs are necessary to hold the rail up. False alarms are more improbable. For surface conduit. 12″ rail standard.

Weight 6 lbs..... **List Price $34.00**



No. 119

No. 119-C Foot Switch

Same as above but for concealed conduit with separate floor box as illustrated, which can be drilled on any four sides as specified.

Weight 8 lbs..... **List Price $40.90**

Floor box for concealed conduit

Extra Length Rail

Switches with rail longer than 12″ can be furnished. No switch should have a rail longer than 36″, as it is too heavy for efficient operation. If a rail is **over 24″**, the contact mechanism will be placed in the middle, requiring an extra support for the end.

Extra Length Rail for foot or fraction..... **List Price $0.70**

Extra Support, for rails over 24″..... **List Price $4.80**

No. 1190 Control Station

For controlling the system and causing alarm to ring continuously. It also provides current carrying capacity for large bells, horns, etc. Only *authorized persons* with a key can turn system off. For open circuit only.

Weight 7 lbs..... **List Price $46.00**

LOUD RINGING BELL..... See page 15

BUZZER OF DISTINCTIVE TONE (No. 160)..... See page 8

INTERIOR BELLS..... See pages 10, 11, 12, 13

No. 1190

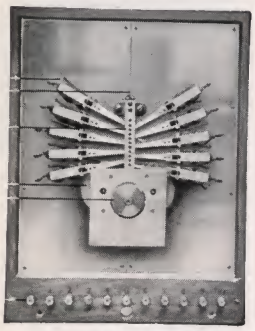
* Carried in stock.

WATCHMAN'S TIME DETECTORS

Battery or Magneto Type—With or Without Clock

National Code Standard

No. 75 Magneto Type



No. 75 Mechanism

No. 76 Magneto Type

THE EDWARDS Watchman's Time Detector records accurately and indelibly (by puncture of a paper dial) every visit of the watchman to every station, and the time of the visit.

The magneto type is **approved by the National Board of Fire Underwriters** and by the **Associated Factory Mutual Fire Insurance Companies.** No battery type is approved, irrespective of make.

INSURANCE rates are materially reduced by the installation of a Watchman's Time Detector.

OPERATION is simple, effective and positive. A paper dial which revolves with the clock movement is inserted each day. It is so set that the time (hour and minute) of insertion is over the indicating point. At each station the watchman visits he turns the magneto handle (or pushes button if battery type). This generates current for operation of the indicator in the instrument corresponding to the station number. The point of the indicator punches a hole in the paper dial showing exactly the time of the visit. At the end of the tour of duty the dial is removed from the clock by someone with a key, filed and becomes a permanent record of the watchman's movements.

THE ADVANTAGES OF THE EDWARDS SYSTEM are:

1. A record **cannot** be made unless the watchman has visited the station.

2. The record **cannot** be changed. It is a puncture on paper.

3. A special device registers the opening and closing of door. The record cannot be tampered with.

4. The dial **cannot** be torn as there is a cut-out system preventing prolonged contact of point and paper.

5. Installation is facilitated by plainly marked connections. Wiring is simplest possible, one common wire from instrument to all stations, and an individual wire from each station to the instrument.

6. All factory-made connections are soldered.

THE APPARATUS CONSISTS of a heavy brass plate on which are mounted:

1. An arm indicator (magnets and armature) at the end of which is a pin for making record. One for each station in plant.

2. An eight-day clock.

3. Metal disc with guides for holding paper dial and keeping it secure.

4. A guide arm with opening for each pin. Paper cannot be torn.

5. Special device which records opening or closing of door.

6. Binding posts.

THE CASE is simple in design and constructed of heavy oak.

PRICES, DIMENSIONS, ETC., SEE NEXT PAGE.

ACCESSORIES FOR THE SYSTEM, SEE NEXT PAGE.

WATCHMAN'S TIME DETECTOR SYSTEMS

SCHEDULE T

No. 75—Time Detector With Clock						No. 76—Time Detector Without Clock					
No. Station	Dimensions—Inches H.	W.	D.	List Price	Weight Lbs.	No. Station	Dimensions—Inches H.	W.	D.	List Price	Weight Lbs.
4	31¾	16	5½	$280.00	54½	4	18	16	5½	$129.00	34
6	31¾	16	5½	290.00	55½	6	18	16	5½	139.00	34¾
8	31¾	16	5½	305.00	56½	8	18	16	5½	158.50	35½
10	31¾	16	5½	315.00	57¾	10	18	16	5½	168.50	36¼
12	31¾	17½	5½	345.00	59	12	18	17½	5½	202.00	37
15	31¾	17½	5½	360.00	61	15	18	17½	5½	217.00	38¼
20	35½	18½	5½	390.00	64½	20	22	18½	5½	251.00	53¼
25	35½	18½	5½	425.00	67	25	22	18½	5½	281.00	56½
30	48¾	17½	5½	509.00	86	30	35	17½	5½	347.00	76½
40	55½	18½	5½	676.00	98	40	42	18½	5½	487.00	86
50	55½	18½	5½	736.00	104	50	42	18½	5½	544.00	90

No. 97 BATTERY TYPE, same prices and dimensions as No. 75.

No. 98 BATTERY TYPE, same prices and dimensions as No. 76.

Where more than 25 stations are required, 2 recording dials will be used. Standard finish, oak or mahogany. For white enamel, add to list $15.00.

Prices include a year's supply of dials, but do not include magneto or battery stations listed below.

No. 163

No. 162

Magneto Stations

SCHEDULE T	Weight	List Price
***No. 161 MAGNETO,** wood case, removable handle	7 lbs.	**$18.85**
No. 161P MAGNETO, wood, portable type with carrying strap No. 72, plug and three feet of cord	7 lbs.	**28.25**
***No. 162 MAGNETO,** metal, weatherproof for outdoors, with removable handle	13 lbs.	**21.95**
No. 163 MAGNETO, flush, metal, removable handle	10 lbs.	**22.50**
HANDLES, one with every three stations, additional, each		**1.25**

No. 161

Battery Stations

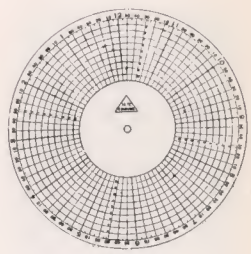
SCHEDULE T	Weight	List Price
No. 211 BATTERY STATION, flush, fits standard switch box	10 ozs.	**$7.00**
No. 211A BATTERY STATION, surface, 2¾″ diameter	8 ozs.	**4.00**
KEYS, one with every three stations, additional, each		**.50**

Standard finish nickel. Old or polished brass if specified.

*Paper Dials

SCHEDULE T	List Price
A year's supply furnished with every instrument. Additional:	
1 to 10 stations, per 1000	**$20.00**
11 to 15 stations, per 1000	**28.00**
16 to 20 stations, per 1000	**28.00**
21 to 25 stations, per 1000	**28.00**

* Carried in stock.



Dial

FIRE ALARM SYSTEMS

DETAILED INFORMATION with complete data and wiring diagrams is available in the Edwards fire alarm catalog, which will be sent on request.

OPEN CIRCUIT SYSTEMS consist of simple break glass stations and standard vibrating bells. Various types of bells are shown in the front of this catalog, all being adaptable to fire alarm systems, the choice depending on the type and quality of bell desired and the operating current that is to be used for the system.

In open circuit systems the operation of a station causes the bell to sound continuously until the system is turned off, and thereby gives a general alarm of fire only. These systems must be tested regularly. A fire alarm annunciator may be used to show the location of the station operated; but if this feature is desired, the closed circuit coded alarm system is much more efficient and very little higher in price when the cost of the annunciator and necessary wiring for it is considered.

CODED CLOSED CIRCUIT SYSTEMS give maximum protection in that lines and devices are continually supervised with a very small current, and should there be an open circuit a trouble bell will ring immediately. Code type stations are used and the operation of any station causes the single stroke bells to sound a coded alarm, giving the location of the station operated.

The most common practice is to operate the system directly from the lighting circuit, either D. C. or A. C. Battery operated systems of this type use electro-mechanical bells to reduce the current consumption. Statistics over the past few years have shown that there is less trouble and less chance of failure with systems operated from the lighting circuit than with battery operated systems. The batteries must be watched and cared for by some thoroughly competent person. Charging apparatus must be provided.

PRE-SIGNAL CODED SYSTEMS are recommended for hospitals, hotels, institutions and places where it is not advisable to sound a general alarm of fire until an investigation has been made and such action is deemed necessary. Pre-signal type stations are used in these systems, the operation of which causes a coded alarm to sound on one circuit of bells only, known as the pre-signal or pilot circuit, these bells being located in the engineer's office, manager's office, principal's office, etc. The fire can be investigated immediately and if it is serious the general alarm can be turned in from any station by an authorized person possessing a key. The key is inserted in the station and the station operated in the usual way, which will cause a general coded alarm to sound on all bells.

ALL APPARATUS including control panels for the various types of systems, bells, and stations will be found listed on the following pages. Code stations for all systems are made in flush and surface type and also in two styles, one where to sound the alarm the door is opened and the lever pulled, and the other where it is necessary to break a glass before the door can be opened. The latter is particularly recommended for schools, as it is a proven fact that mischievous children will hesitate to break the glass in the door.

FIRE ALARM SYSTEMS

Standard Code Stations

SCHEDULE T

For Use in Closed Circuit Fire Alarm Systems
Bulletins on Complete Systems Furnished on Request

No. 1275. The mechanical movement is simple in design; gear wheels are cut, not stamped. Separable conduit attachment. Code signal sounded four times at each operation. When lever is released it automatically disengages, so successive pulling cannot interfere with proper operation. No winding necessary. Cover of box provided with spring hinge. Silent or bell tests may be made, using key supplied with station. 7⅝″ x 4″ x 5″ deep.

For surface conduit.....Weight 8 lbs.....**List Price $38.00**

No. 1276. Same as above for concealed conduit....Weight 9 lbs.....**List Price $46.00**
8½″ high, 7 5/16″ wide, including flange Back box 7⅜″ high, 5¼″ wide, 3⅜″ deep.

No. 1275-2. Same as No. 1275, only locked door with glass window is substituted, making two operations to sound alarm. Breaking glass opens door; pulling lever sounds alarm.

For surface conduit.....Weight 8 lbs.....**List Price $55.00**

No. 1276-2 Same as above for concealed conduit....Weight 9 lbs.....**List Price $63.50**
8½″ high, 7 5/16″ wide, including flange Back box 7⅜″ high, 5¼″ wide, 3⅜″ deep.

No. 1275

No. 1276

Pre-Signal Code Stations

For Use in Pre-Signal, Closed Circuit Fire Alarm Systems
Bulletins on Complete Systems Furnished on Request

Same construction and design as above described stations, except that signal is sounded at pre-determined place only, allowing investigation, after which general alarm can be sounded by inserting key and pulling lever at any station.


Semi-Flush Station

No. 1275-DO. Pre-signal station (1275 style).....**List Price $52.00**

No. 1276-DO. Pre-signal station (1276 style).....**List Price $60.00**

No. 1275-2-DO. Pre-signal station (1275-2 style).....**List Price $62.00**

No. 1276-2-DO. Pre-signal station (1276-2 style).....**List Price $70.00**

For Sirens

All of the above stations can be arranged with slow movement, for which add to list $20.00. Because of the heavy current demand of most sirens, it is advisable to use the No. 240 Relay shown on page 43. Full information as to intended use should be given in ordering this type station.

No. 1276-2

FIRE ALARM SYSTEMS

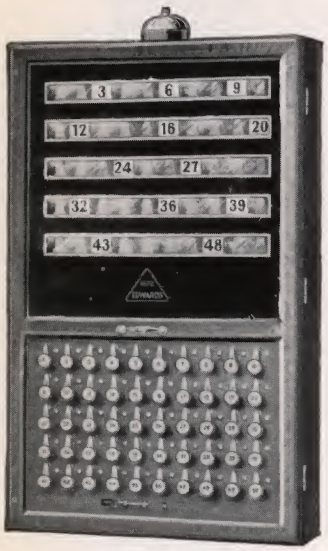
Non-Code Stations

No. 77

No. 224

No. 2241

No. 2240



No. 114

SCHEDULE T

No. 224 FLUSH BREAK GLASS STATION—6 to 110 V. Improved design with hinged front so test operation is same as actual alarm operation. Size 3 7/16″ x 4 3/8″ to fit standard single switch box. Finish, red enamel. Test key, hammer and chain with each station. Open circuit type furnished if not specified.

***No. 224** Open circuit.....Weight 1 lb.....**List Price $ 6.25**
No. 224C Closed circuit.....Weight 1 lb.....**List Price $10.00**

No. 225 SURFACE BREAK-GLASS STATION—6 to 110 V. Same improved design as above but with cast fitting for surface wiring. Fitting can also be mounted on standard switch box for use with concealed wiring but where it is desired to have stations protrude from wall to be visible from a distance.

***No. 225** Open circuit.....Weight 3¼ lbs.....**List Price $ 7.25**
No. 225C Closed circuit.....Weight 3¼ lbs.....**List Price $11.00**

No. 2240 SEMI-FLUSH BREAK-GLASS STATION—6 to 220 V. Of heavier construction than No. 224 with slate insulation as required by some fire prevention authorities. Test key, hammer and chain with each station.

***No. 2240** Open circuit.....Weight 2 lbs.....**List Price $15.50**
No. 2240C Closed circuit.....Weight 2 lbs.....**List Price $19.25**

No. 2241 SURFACE BREAK-GLASS STATION—6 to 220 V. Same construction as No. 2240 but with separable conduit fitting drilled top and bottom for ½″ conduit unless other drilling is specified. Finish, red enamel. Test key, hammer and chain with each station.

***No. 2241** Open circuit.....Weight 4 lbs.....**List Price $15.50**
No. 2241C Closed circuit.....Weight 4 lbs.....**List Price $19.25**

***No. 77 SURFACE BREAK-GLASS STATION**—Low voltage only. No test. Open circuit only. Size 3¾″ diameter. Standard finish, polished brass rim, red center.
Weight 7 ozs.....**List Price $2.45**

GLASSES for any station.....**List Price $0.44**
HAMMER AND CHAIN for any station.....**List Price $0.60**

No. 114 Fire Alarm Annunciator

Hand Reset, Surface Type, Metal Case, Standard Finish Mahogany, Oak or Black, No Extra Charge,

See Page 39 for Special Finishes

Requires 6 Volts D. C. or 8 Volts A. C. at the Annunciators

FOR use in local open circuit fire alarm systems using break-glass stations (see page 53). The operation of the station causes the corresponding drop in the annunciator to indicate and the bell on annunciator to ring. By the master switch on annunciator all bells in building can then be rung, or by individual switches can be rung singly or in certain sections of the building.

SCHEDULE T

No. of Drops	Arrangement		Dimensions			†Weight	List Price
	Across	Down	H.	W.	D.		
10	5	2	17½	12⅜	5	10½ lbs.	$ 45.98
12	6	2	17½	13¾	5	11½ lbs.	55.16
14	5	3	22	12⅜	5	13 lbs.	64.54
16	6	3	22	13¾	5	14¼ lbs.	74.02
18	6	3	22	13¾	5	14½ lbs.	83.00
20	7	3	22	15⅛	5	15¾ lbs.	91.92
22	6	4	26½	13¾	5	17¼ lbs.	105.78
24	6	4	26½	13¾	5	17½ lbs.	110.30

Additional drops, per set of two.....$13.42

* Carried in stock.
† Approximate, per article.

FIRE ALARM SYSTEMS

Control Panels

SCHEDULE T

S. S. CONTROL PANEL. For direct connection of the fire alarm system to the 110-Volt D. C. lighting service. Where 220-volt, 3-wire service is available, trouble bell operates directly on the 110-volt service, but if this is not available, battery operation of the same is arranged. All instruments, connections, etc., mounted on slate panel, which is enclosed in a heavy steel cabinet of sufficient size to allow easy wiring. Door is secured with lock, and has glass panel for observation of meters. Price includes Trouble Bell. Knockouts provided on two sides and bottom of case, for conduit.

SINGLE CIRCUIT SYSTEM ..... **List Price $250.00**

ADDITIONAL CIRCUITS, PER CIRCUIT ..... **List Price 45.00**

S. S. A. CONTROL PANEL. For alternating current, otherwise the same construction and price as S. S. Panel.

P. S. S. PRE-SIGNAL PANEL (direct current). The same as S. S. Panel, only arranged for dual operation (see description of system).

SINGLE CIRCUIT SYSTEM ..... **List Price $350.00**

ADDITIONAL CIRCUITS, PER CIRCUIT ..... **List Price 45.00**

P. S. S. A. PRE-SIGNAL PANEL, for alternating current, otherwise the same construction and price as P. S. S. Panel.

E. M. B. CONTROL PANEL, is designed for use with systems operated by primary battery. Panel provides means of supervising with a very low current. Operating current is automatically switched in and out of alarm system as required. Under this arrangement the life of a battery is approximately 2 years, as compared with the normal life of 125 days. Construction of panel the same as above. Price includes Trouble Bell.

SINGLE CIRCUIT SYSTEM ..... **List Price $250.00**

ADDITIONAL CIRCUITS, PER CIRCUIT ..... **List Price 45.00**

Control Panel

Central Control Stations

SCHEDULE T

No. 229 CONTROL STATION. Used in towns, villages and industrial plants to sound coded alarms or signals, and for location at headquarters or telephone central in localities where fire alarms are telephoned. Movement is similar to that in No. 1275 Station. Furnished with six code wheels. The code wheel desired is placed on shaft. Pulling the lever automatically winds the movement and releases it, sounding the code four times.

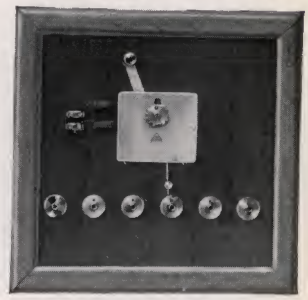
Weight 26 lbs. ..... **List Price $150.00**

EXTRA WHEELS ..... **List Price 5.00**

No. 229S CONTROL STATION. Similar to above except for operation of **motor-driven sirens,** the code being sounded twice only, because of the slow movement necessary to allow siren to gain speed. In ordering, full information should be given concerning make of siren, operating current, code, etc.

Weight 26 lbs. ..... **List Price $190.00**

EXTRA WHEELS ..... **List Price 5.00**



No. 229 and 229S

Weatherproof Case

SCHEDULE T

No. 1290. For protection of fire alarm stations for outside installation. Drilled to receive ½″ or ¾″ conduit. Vault handle latch or lock. Size 12″ x 10″ x 6½″.

Weight 32 lbs. (less station) ..... ***List Price $35.90**

STRAP KEY FOR RETURN TESTS ..... **List Price 3.75**

GLASS IN DOOR ..... **List Price 5.80**

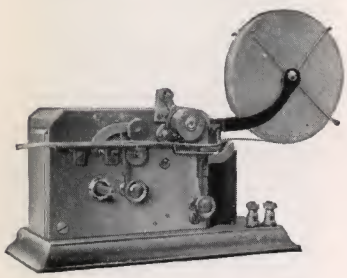
* When used with No. 1275 type of station cover of latter is omitted, for which an allowance of $2.90 list is made.

No. 1290
Weatherproof Case

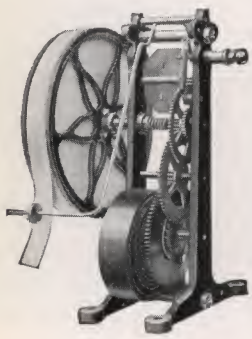
FIRE ALARM SYSTEMS

No. 23 (A.C.) No. 24 (D.C.)

No. 1331 Conduit Type



No. 2197



No. 5985

Bells for Coded Systems

These bells are correctly designed for series operation on the various types of closed circuit systems. They are neat in appearance and of excellent construction.

No. 23F (FOR A. C.) AND No. 24F (FOR D. C.) LIGHTING CIRCUIT

See Page 16 for Full Description

SCHEDULE T

Size	†Weight	List Price	Size	†Weight	List Price
4″	4 lbs.	$19.25	10″	8 lbs.	$38.50
6″	5 lbs.	24.75	12″	11 lbs.	42.60
8″	6 lbs.	28.90			

Nos. 133 AND 1331, ELECTRO-MECHANICAL BELLS FOR BATTERY SYSTEMS

See Page 14 for Full Description

SCHEDULE T

Size	†Weight	List Price Nos. 1331 and 1330	Size	†Weight	List Price Nos. 1331 and 1330
6″	22 lbs.	$82.40	10″	27 lbs.	$87.97
8″	24 lbs.	84.95	12″	30 lbs.	95.75

Bells for Non-Coded Systems

Non-code systems use the standard type of vibrating bell, the choice of which depends entirely upon the operating current, 110 V. A. C., D. C., battery, or transformer, and also on the type of bell construction preferred. The following bells are listed in the front of this catalog.

For battery:

No. 100, page 10.
No. 222, page 9.
No. 17, page 8.

For transformer:

No. 510, page 12.
No. 551, page 13.

For A. C. lighting circuit:

No. 551, page 13.
No. 100, page 10.

For D. C. lighting circuit:

No. 100, page 10.

PEN REGISTER, automatic, registers in ink on paper the number of the fire alarm box operated. Indication consists of a number of short dashes and forms a permanent record of the system. Self starting and stopping. Resistance 20 ohms, open circuit only. Can be used with relay for closed circuit.

No. 2197, SINGLE PEN.....Weight 7 lbs.....**List Price $168.50**
No. 2197, DOUBLE PEN.....Weight 1¾ lbs.....**List Price 180.00**

PAPER WINDER, automatic, for use with above. Winds and holds paper neatly as delivered by register.

No. 5985.....**List Price $13.50**

† Per article in shelf package.

EDWARDS TANK SENTINEL

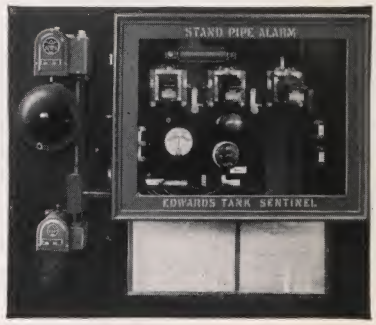
For House Tanks, Fire Standpipe and Sprinkler Systems

(Detailed Bulletin Upon Request)

EDWARDS Tank Sentinels are designed for use where a supply of water is maintained for sanitary or fire purposes. The closed circuit equipment is primarily designed to meet the requirements of the Bureau of Fire Prevention, of the New York Fire Department, adopted by the Board of Standards and Appeals under "Standpipe" Fireline Rules. It is recommended for installation in all buildings where automatic or manually controlled pumping systems are employed as a means of insuring a constant and dependable supply of water at all times.

Open circuit alarms are lower in cost than closed circuit types, and employ current only during the period that the alarm is registering. Failure of current or trouble in the wiring system are not supervised and consequently periodic tests are necessary to insure operation of the apparatus.

Open and closed circuit alarms can frequently be applied for use in Industrial and Chemical Plants, where supplies of various liquids are stored in tanks.



Standpipe Alarm
Cat. No. 1208 D. C.
Cat. No. 1209 A. C.

Non Supervised House Tank System

An open circuit, audible and visual alarm indicating high and low water in gravity or pressure water supply tanks. Operates directly from A. C. or D. C. lighting service mains. System requires the following units:

1 Control panel with "High" and "Low" relays, Signal lamps, Control switch, Alarm bell, etc.....**For D. C. Cat. No. 1206**
For A. C. Cat. No. 1207
1 Gravity tank switch with weatherproof housing and copper ball float
or **Cat. No. 1202**
1 Pressure Gauge Switch.....**Cat. No. 1203**

Specify current (A. C. or D. C.) and voltage. **Prices On Application.**

Supervised Fire Standpipe or House Tank System

A closed circuit, audible and visual alarm indicating high and low water in Fire Standpipe or House Tanks. Operates directly from lighting service mains. Approved by New York Fire Department. System requires the following units.

1 Control Panel with "High," "Low" and "Trouble" indicating relays, milliammeter, control switch, fuses, signal lamps, and test keys. Mounted in a steel cabinet with locked door having a glass face....**For D. C. Cat. No. 1208**
For A. C. Cat. No. 1209
1 6″ Alarm Bell.....**For D. C. Cat. No. 1001 D.C.**
For A. C. Cat. No. 1001 A. C.
1 4″ Trouble Bell.....**For D. C. Cat. No. 1001 T. D.**
For A. C. Cat. No. 1001 T. A.
1 Gravity tank switch with weatherproof housing and copper ball float.
or **Cat. No. 1200**
1 Pressure gauge switch.....**Cat. No. 1201**

Specify current (A. C. or D. C.) and voltage. **Prices On Application.**

Sprinkler Alarm
Cat. No. 1210 D. C.
Cat. No. 1211 A. C.

Supervised Sprinkler System

A closed circuit, audible and visual alarm indicating high and low water in gravity or pressure tanks and water flow through sprinkler piping. Operates directly from A. C. or D. C. lighting service mains. Approved by New York Fire Department. System requires the following units.

1 Control Panel with "High," "Low" and "Trouble" indicating relays, milliammeter, control switches, test keys, and fuses. Indicating relays are provided for each tank, (gravity or pressure) and each water flow valve. Panel is mounted in a steel cabinet with locked door having a glass face.
For D. C. Cat. No. 1210
For A. C. Cat. No. 1211
1 Gravity tank switch with weatherproof housing and copper ball float for each gravity tank.....**Cat. No. 1200**
1 Pressure gauge switch for each pressure tank.....**Cat. No. 1201**
1 6″ Alarm Bell.....**For D. C. Cat. No. 1001 D. C.**
For A. C. Cat. No. 1001 A. C.
1 4″ Trouble Bell.....**For D. C. Cat. No. 1001 T. D.**
For A. C. Cat. No. 1001 T. A.
1 8″ Water Flow Bell.....**For D. C. Cat. No. 1001 D. C.**
For A. C. Cat. No. 1001 A. C.

Specify current (A. C. or D. C.) and voltage. **Prices On Application.**

Gravity Tank Switch
Open Circuit, Cat. No. 1202
Closed Circuit, Cat. No. 1200

TRADE 1872 MARK EDWARDS

Engineering Data

Correct Resistance for Correct Operation

THE standard resistance that has been adopted for bells, buzzers, etc., as listed, is that which under average conditions gives best operation. It would be impossible to adopt a standard resistance that would be applicable to every type of installation. If bells were wound so that twenty-five of them could be operated at once without drawing too much current, they would be of too high resistance for the average use where only three or four bells would be used. In schools and similar installations where many bells will be operated at once, they should be wound to high resistances. The same procedure is advisable when there are long runs. The most efficient method is to specify "wound to the proper resistance for operation on . . . volts," giving the approximate length of line, size of wire, etc. Standard winding, voltage, and current consumption information on standard bells and buzzers is listed in this section of the catalog.

CHARGES FOR SPECIAL VOLTAGE AND RESISTANCE

Add to list price of Standard Bell, Buzzer, etc., Schedule: Same as Standard Bell, Buzzer, etc.

CLASS A includes: Catalog Nos. 13, 15, 16, 26, 136, 137, 138, 156, 160, 181, 182, 710 to 750.
CLASS B includes: Catalog Nos. 17, 100, 219, 1001, 220A, 220B, 222, 133, 1330, 1331.

	Up to 24 Volts or Up to 150 Ohms			25 to 48 Volts or 151 to 300 Ohms			48-110 Volt or 301 to 500 Ohms
Quantities of	Up to 4	5 to 20	Over 20	Up to 4	5 to 20	Over 20	
Class A	$1.50	$1.00	$0.70	$2.50	$1.50	$1.25	Same Price
Class B							as
3″ & 4″	2.00	1.50	1.00	3.25	2.75	2.25	Standard
6″ & 8″	5.00	4.50	4.00	6.00	5.50	5.00	110 Volt
10″ & 12″	6.00	5.50	5.00	7.00	6.50	6.00	Bells,
14″ to 18″	8.00	7.50	7.00	9.00	8.50	8.00	Etc.

RESISTANCE, VOLTAGE AND CONSUMPTION CURRENT DATA OF STANDARD BELLS, BUZZERS, ETC.

Cat. No.	Size Inches	Standard Resistance Ohms	D. C. Volts	D. C. Amps.	A. C. Volts	A. C. Amps.	Cat. No.	Size Inches	Standard Resistance Ohms	D. C. Volts	D. C. Amps.	A. C. Volts	A. C. Amps.
13	1	10	6	.100	8	.25	100	6 & 8	1000	220	.06	....	....
13	1¾	9	6	.200	8	.400	100	10 & 12	800	220	.05	....	....
13	2½	6	6	.250	8	.300	100	14 to 18	800	220	.06	....	....
13	3	5	6	.200	8	.300	100	4 to 12	40	....	....	110	.50
13	4	3½	6	.300	....	....	100	4 to 12	200	....	....	220	.80
13	6	3½	6	.30	....	....	100	Buzzer	3½	6	.20	....	....
15	0	10	6	.100	8	.250	100	Buzzer	600	110	.03	....	....
15	1	9	6	.200	8	.400	100	Buzzer	1000	220	.02	....	....
15	2	6	6	.250	8	.300	156	.....	1	3	.75	6	1
15	3	5	6	.300	8	.300	160	.....	1	3	.75	6	1
15	4	3½	6	.300	....	....	182	.....	1	3	.75	6	1
16	.....	9	6	.200	8	.400	222	3 to 5	5	6	.275	....	....
17	3 & 4	2	6	.50	....	....	222	6 to 12	3	6	.350	....	....
17	5 to 8	3½	6	.30	....	....	222	Buzzer	8	6	.10	....	....
17	10 & 12	3	6	.30	....	....	222	Buzzer	600	110	.50	....	....
23	4 to 12	* 4	8	*2	....	....	510	3 to 5	5	....	....	8	.25
23	4 to 12	450	110	.25	....	....	510	6 to 12	½	....	....	8	.50
23	4 to 12	2400	220	.10	....	....	510	3 to 5	750	....	....	110	.06
24	4 to 12	* .08	....	....	* 9	3.75	510	6 to 12	200	....	....	110	.06
24	6 to 12	165	....	....	110	.20	510	Buzzer	5	....	....	8	.25
24	6 to 12	820	....	....	220	.10	510	Buzzer	750	....	....	110	.04
26	.....	4	6	1½	16	1½	551	3 to 6	4	....	....	8	.50
100	3 & 4	3½	6	.30	....	....	551	8 to 12	2	....	....	8	.50
100	6 & 8	2½	6	.30	....	....	551	3 to 6	450	....	....	110	.20
100	10 & 12	3½	9	.50	....	....	551	8 to 12	400	....	....	110	.10
100	14 to 18	3½	9	.50	....	....	551	Buzzer	5	....	....	8	.25
100	3 & 4	600	110	.03	....	....	551	Buzzer	750	....	....	110	.04
100	6 & 8	500	110	.04	....	....	750	Buzzer	2½	3	.25	3	.25
100	10 & 12	400	110	.07	....	....	136	.....	9	6	.200	8	.400
100	14 to 18	350	110	.08	....	....	137	.....	9	6	.200	8	.400
100	3 & 4	1000	220	.06	....	....	138	.....	9	6	.200	8	.400

* For series of operation of one or the limit of bells per circuit.
See page 59—"Series vs. Multiple Operation."

Engineering Data

Series vs. Multiple Operation of Bells, Etc.

VIBRATING bells and buzzers must obviously be operated in multiple. A bell vibrates because the armature when drawn up to the magnets mechanically breaks the circuit and falls back, making the circuit again and repeating this operation. If they were wired in series the quick breaking of the circuit of the first bells would prevent a sufficient amount of current reaching the bells further along the line. When wired in multiple (or parallel, which is the same thing) they are across the line and each gets the same amount of current continuously.

Single stroke bells can be wired either in multiple or series, but as they require considerably more current than vibrating bells, it is advisable when operating them from lighting circuits to wire them in series. On 112 Volts D. C., for example, low resistance bells would be used, 4 ohms. If 14 of these were placed in series, the total resistance of the bells would be 56 ohms, and the current consumption of the *whole circuit* would be 2 amperes.

In standard fire alarm practice, where single stroke bells are installed in series, this standard 4 ohm resistance is adopted, which is plenty to allow the operation of 14 bells per circuit on 112 Volts D. C. If less than 14 bells are used, a 4 ohm resistance unit is placed in the circuit for each bell omitted. This method also allows easy additions to the system without changing any of the existing bells. On A. C. the limit of bells per circuit is 10.

The Correct Transformer and the Correct Size Wire

THE greatest source of trouble on signaling systems is probably the use of too small wire. Many engineers, architects, and contractors specify "Use nothing smaller than No. 18, and larger size if necessary for good operation." No. 18 was designed and placed on the market principally for private house, back and front door, bell work, for which it is satisfactory; but for large apartment and other signaling work, it is in many cases too small.

An "8 volt transformer" means nothing if it is not properly designed with sufficient wattage to insure 8 volts *at the bell*, and the bell may be on the top floor of a thirty-story building. Increasing the voltage so that the last bell will still get 8 volts irrespective of the line loss is not the most efficient method, because then the bells nearest the transformer will get too high a voltage and in a short time their contacts will burn or fuse from the arc. The correct method is to adopt the correct voltage and compensate for the line loss by the correct size wire and correct wattage transformer. The following table is an actual test under various conditions and will prove very useful.

Quantity of Bells that Can Be Rung at Once in Multiple

THIS chart shows the number of bells that can be rung *at once*. Do not confuse this to mean the limit of your installation. For example, you can ring 8 No. 551 Bells at once on the No. 88 Transformer over 200 feet of No. 18 wire. Your installation may be 25 bells over the same length of wire, but if not more than 8 would be rung at once, the No. 88 Transformer would be satisfactory.

Quantity of No. 551 Bells (Any Size) That Can Be Rung at Once in Multiple

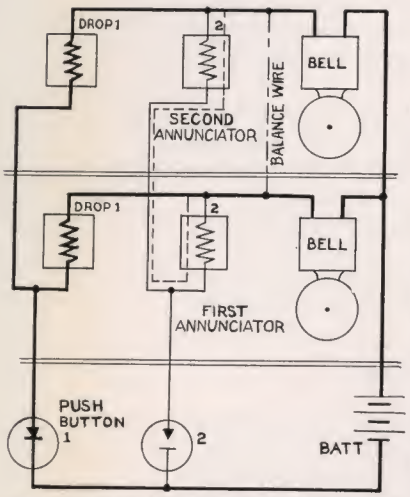
No. 18 Wire	Nos. 86, 86E, 860 Bell Ringing Transformers	No. 88 50 Watt	No. 89 75 Watt	No. 90 100 Watt	No. 93 150 Watt	No. 94 250 Watt
200 ft.	2	8	12	20	23	28
400 ft.	1	7	10	19	20	24
600 ft.		6	9	18	19	22
800 ft.		4	7	17	18	20

Quantity of Iron Box Bells (Any Size) That Can Be Rung at Once in Multiple

No. 18 Wire	No. 88 50 Watt	No. 89 75 Watt	No. 90 100 Watt	No. 93 150 Watt	No. 94 250 Watt
200 ft.	8	12	14	16	20
400 ft.	6	10	12	14	16
600 ft.	5	8	10	12	14
800 ft.	4	6	8	10	12

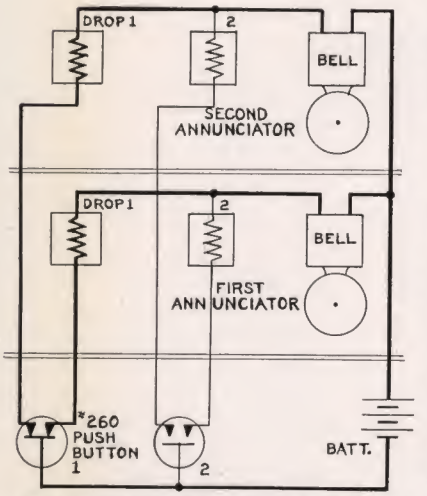
Engineering Data

OPERATION OF ANNUNCIATORS



ANNUNCIATORS WIRED IN MULTIPLE WITH STANDARD PUSHES

Diagram 1



ANNUNCIATORS WIRED IN MULTIPLE USING #260 PUSHES

Diagram 2

ANNUNCIATOR systems present no difficulties if large enough wire is provided to compensate for line loss and allow sufficient voltage for operation **at** the annunciator. They give perfectly efficient operation on transformer if it is of correct wattage and design.

HAND RESET ANNUNCIATORS are equipped with drops having a single magnet only. The reset operation is done mechanically.

ELECTRIC RESET ANNUNCIATORS are equipped with drops having two magnets, one to indicate and one to reset. If there are five or six drops down, they all have to be reset at once, and that condition is taken care of in the design of the annunciator by having a reset button for approximately every fifteen drops, as this number can safely be reset at the same time by the standard voltage specified for the operation of the annunciator. The electric reset annunciator is best for hard service because it cannot be damaged by any mechanical resetting. Once properly installed its correct operation can never be interfered with.

"AUTOMATIC RESET" ANNUNCIATORS are electric reset annunciators so arranged that only one indication appears at a time, each succeeding indication automatically resetting the one before it. The term "automatic reset" is often confused with electric reset and hand reset. Although the automatic reset annunciator is good for some uses, the objection to it is the fact that an incoming call will automatically reset the indication of a preceding call before it may have been noticed or acted upon.

Like bells, annunciators should be wound to special resistance for operation on voltages higher than specified as standard in the catalog. The following is voltage and current data on annunciators at several commonly used voltages. More detailed information will gladly be given on request.

HAND RESET ANNUNCIATORS
Nos. 81, 91, 215, 10, 130, 83, and 1993

At 4½ V. D. C., max. 1.25 amp.
At 8 V. D. C., max. 2 amps.

ELECTRIC RESET ANNUNCIATORS
Nos. 403, 409, 413, 414, 415

At 6 V. D. C., max. .50 amp. to indicate.
max. .10 amp. per number of drops down at once to reset.

At 30 V. D. C., max. 1 amp. to indicate.
max. .08 amp. per number of drops down at once to reset.

At 10 V. A. C., max. .75 amp. to indicate.
max. .10 amp. per number of drops down at once to reset.

At 24 V. A. C., max. .50 amp. to indicate.
max. .045 amp. per number of drops down at once to reset.

HIGH VOLTAGE ANNUNCIATOR
No. 807

At 110 V. D. C. or A. C. with 4″ bell, max. .05 amp.

MULTIPLE OPERATION OF ANNUNCIATORS

IF IT is desired to have one call indicate on two or more annunciators, it is most practical to use the electric reset type and wire them in multiple. In placing orders for electric reset annunciators to operate in multiple, it should be so specified if the annunciators are of different sizes, for instance, an 8-drop annunciator to operate in multiple with 8 drops of another 12-drop annunciator. This is because it is advisable to divide the 12-drop annunciator into two sections with a separate buzzer for each in order to produce the balanced circuit necessary for efficient operation.

Hand reset annunciators should not be wired in multiple, although they may sometimes operate. The wiring diagrams on this page show the possiblity of overflow currents which can cause the wrong drops or three or four drops to indicate in error.

Diagram 1 shows two hand reset annunciators in multiple with standard pushes. Push No. 1 has been closed and the heavy line shows the intended path of current through drop No. 1 of both annunciators. The dotted line, however, shows how current might go if line resistance were such as to make this the easiest path back to the battery, which action would also cause one or both of No. 2 drops to indicate. Electric reset annunciators in multiple will never give this trouble.

If the installation by some peculiarity requires hand reset annunciators, the No. 260 multiple contact push should be used with a section wire to each drop as shown in diagram No. 2. The heavy line indicates the only possible path of current when push No. 1 is operated.

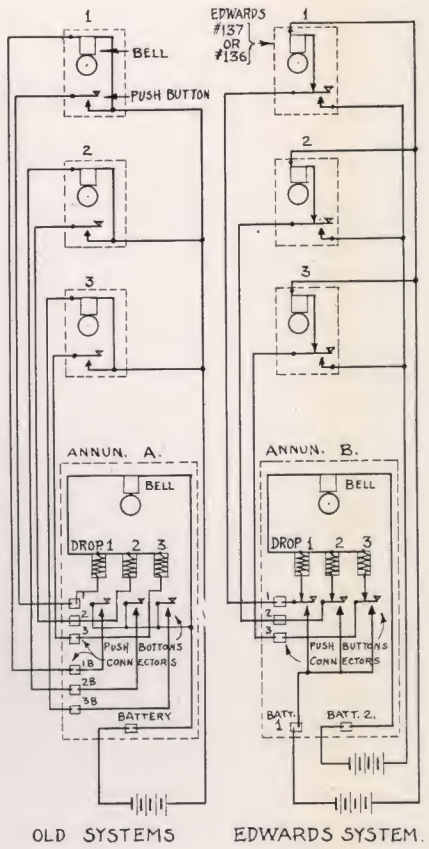
If an installation has already been made of hand reset annunciators and you are having trouble, sometimes a "balance wire" connected as shown on diagram No. 1 will overcome the difficulty.

Engineering Data

Return Call Systems

EDWARDS return call annunciators are designed and manufactured with special return call pushes. Some manufacturers offer as "return call annunciators" what amounts to nothing more than an ordinary annunciator with standard midget pushes underneath it. By reference to the wiring diagrams on this page, it will easily be seen that the cost of installing the old type systems is many times more than the Edwards system, with much more possibility of trouble. The Edwards system requires two common wires and only one section wire to each outlying station. The old systems require one common wire, but two section wires to each station. This method is accomplished with the specially designed apparatus and two sources of current supply, either battery or transformer. On larger jobs, the difference is particularly important as on a 30-station job the old system would need 61 wires, whereas the Edwards system would need but 32 wires.

The installation of return call systems should follow the same rules of proper size wire and proper voltage as described in this section for annunciators and bells.



How to Choose Push Buttons

THE percentage of trouble on bell and annunciator systems due to improper pushes is very large. As the contacts of the push button must handle the make and break of the entire current demand of the circuit, it should be just as efficient in its sphere as motor starting switches are in theirs.

Flush pushes to fit $\frac{5}{8}$" or $\frac{3}{4}$" holes should be of the non-grounded or insulated type; otherwise if they are placed in steel door frames or happen to touch a metal lathe, or are even placed in damp plaster walls, the circuit will be grounded. The contacts of a push button should be of the sliding, self-cleaning type, and not just a flat contact. All Edwards flush pushes, Nos. 620, 625, etc., and desk pushes Nos. 190, 197, etc., have these features. These pushes are suitable for low voltage work up to 24 volts, but should not be required to pass more than 2 amperes on 12 volts and preferably not more than 1 ampere on 24 volts.

The No. 260 is a 4-contact push but is often used to take care of a large current demand by connecting the contacts together in pairs so that the contacts are really double the capacity of the ordinary 2-contact push button.

The ordinary type of push should never be used on 110 or 220 volts, and for this type of service there is the Edwards No. 85, No. 85A, etc. These pushes are very often used for 24-48 volt work, as they have a quick break and ample contact surface.

Resistance, Voltage, and Current Data on Relays

Cat. No.	Resistance Ohms	D. C. Volts	D. C. Amperes	A. C. Volts	A. C. Amperes
240 Cl. Ct.	30	6	.25	...	.....
240 Open Ct.	3	6	.50	...	.....
240 Cl. Ct.	200	12	.96	...	.....
240 Open Ct.	500	110	.25	...	.....
240 Cl. Ct.	1000	20	.02	...	.....
242 Open Ct.	1	...	...	20	1 (*2.1)
242 Open Ct.	25	...	...	110	.25 (*.50)
242 Cl. Ct.	125	...	...	110	.04 (*.10)
243 Cl. Ct.	6	...	...	16	.14 (*.20)
243 Cl. Ct.	450	...	...	110	.08 (*.10)
243 Cl. Ct.	500	...	...	220	.08 (*.10)
243 Cl. Ct.	2000	...	...	220	.01 (*.02)
244 Cl. Ct.	26	1	.035	...	.....
244 Open Ct.	26	2	.08	...	.....
244 Cl. Ct.	50	1	.035	...	.....
244 Open Ct.	50	2	.08	...	.....
244 Cl. Ct.	100	2	.02	...	.....
244 Open Ct.	100	4	.04	...	.....

Cat. No.	Resistance Ohms	D. C. Volts	D. C. Amperes	A. C. Volts	A. C. Amperes
244 Cl. Ct.	500	6	.012	....	....
244 Open Ct.	500	12	.024	....	....
245 Open Ct.					
Ind. Magnet	6½	4	.50	....	....
Reset Magnet	7	6	.75	....	....
245 Open Ct.					
Ind. Magnet	500	110	.25	....	....
Reset Magnet	375	110	.25	....	....
1238 Cl. Ct.	20	¾	.035	....	....
1238 Open Ct.	20	1½	.075	....	....
1238 Cl. Ct.	50	1½	.028	....	....
1238 Open Ct.	50	3	.06	....	....
1238 Cl. Ct.	100	2	.02	....	....
1238 Open Ct.	100	4	.04	....	....
1238 Cl. Ct.	150	2¼	.018	....	....
1238 Open Ct.	150	4½	.03	....	....
1238 Cl. Ct.	200	2½	.012	....	....
1238 Open Ct.	200	5	.025	....	....

*Starting Current

Resistance, Voltage, and Current Data on Door Openers

Cat. No.	Resistance Ohms	D. C. Volts	Operation Amperes	A. C. Volts	Operation Amperes
9	2¾	4½	1.5	16	1
152					
153	1	4½	3.25	16	2.75
154					
155					

Cat. No.	Resistance Ohms	D. C. Volts	Operation Amperes	A. C. Volts	Operation Amperes
1541	1	4½	3.25	16	2.75
48					
50	3¾	4½	1	24	1
51					
52	4	4½	1	....	....

ALPHABETICAL INDEX

ALPHABETICAL INDEX—(*Continued*)

NUMERICAL INDEX